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Predicting Adult Attachment Styles From Past Attachments and Relationship Experiences

by

Áine Marie Humble ©

A thesis submitted to the Faculty of Graduate Studies and Research in partial fulfillment of the requirements for the degree of Master of Science

in

Family Life Education

Department of Human Ecology

Edmonton, Alberta

Fall 1995

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The undersigned certify that they have read, and recommend to the Faculty of Graduate Studies and Research for acceptance, a thesis entitled **Predicting Adult Attachment Styles From Past Attachments and Relationship Experiences** by **Áine Marie Humble** in partial fulfillment of the requirements for the degree of **Master of Science in Family Life Education**.

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June 23, 1995

Dedicated to

Mum, Dad, and Bart

ABSTRACT

This study examined the roles of parent-child attachment, adolescent attachment, and romantic relationship experiences in determining current attachment styles of young adults. A sample of 386 individuals (17 to 26 years old) completed questionnaires asking about parent-child relationships, adolescent romantic relationships, and current ways of relating in romantic relationships.

Overall, current attachment styles were reliably predicted. The insecure attachment styles were predicted with greater accuracy than the secure attachment style, and males' attachment styles were predicted with greater accuracy than females' attachment styles. Distinct patterns of predictors arose for males and females in the four attachment styles, suggesting a possible gender socialization effect. Although early attachment relationships may play some role in shaping later attachment styles, this research suggests that other relationship experiences may alter early working models more dramatically than previous research would suggest. Ways in which adolescent romantic relationships may contribute to personality and social development are discussed.

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TABLE OF CONTENTS

I. Introduction and Statement of the Problem p. 1
  - A. Background p. 1
  - B. Theoretical Framework p. 2
    - 1. Infant Attachment p. 2
    - 2. Adult Attachment p. 5
  - C. Summary and Statement of Problem p. 6

II. Literature Review p. 8
  - A. Hazan and Shaver's Model p. 8
  - B. Bartholomew's Model p. 11
  - C. Love and Gender p. 14
  - D. Stability and Change in Attachment Styles p. 18
    - 1. Stability p. 18
    - 2. Change p. 19
      - a) Adolescent Relationships p. 19
      - b) Relationship History p. 21
  - E. Purpose of Study and Hypotheses p. 23

III. Methodology p. 27
  - A. Design p. 27
  - B. Sampling Procedure p. 27
  - C. Measures p. 29
    - 1. Adult and Adolescent Attachment p. 29
    - 2. Emotional Distress p. 30
    - 3. Parent-Child Attachment p. 31
      - a) Mother-Child and Father-Child Attachment p. 31
      - b) Parental Bonding Instrument p. 32
    - 4. Relationship History and Demographic Questions p. 34

  D. Ethical Issues p. 34
  E. Limitations of the Study p. 35

IV. Results p. 37
  A. Data Cleaning p. 37
  B. Description of Sample p. 37
  C. Adolescent and Adult Attachment Styles p. 38
  D. Emotional Distress p. 43
  E. Measures of Parent-Child Attachment p. 45
    1. Mother-Child and Father-Child Attachment Styles p. 45
    2. Parental Bonding Instrument p. 47
    3. Comparision of the Parental Measures p. 48
  F. Regression Analysis p. 50
    1. Predicting Adolescent Attachment Scale Scores from Parent-Child Attachment p. 52
      a) Predicting Adolescent Dismissing Attachment Scale Scores p. 53
      b) Predicting Adolescent Fearful Attachment Scale Scores p. 54
      c) Predicting Adolescent Preoccupied Attachment Scale Scores p. 55
      d) Predicting Adolescent Secure Attachment Scale Scores p. 55
      e) Summary of Results From First Set of Regression Analyses p. 56
    2. Predicting Adult Attachment Scale Scores From Parent-Child Attachment, Adolescent Attachment, and Romantic Relationship Experiences p. 59
      a) Predicting Adult Dismissing Attachment Scale Scores p. 60

            b) Predicting Adult Fearful Attachment Scale Scores p. 62
            c) Predicting Adult Preoccupied Attachment Scale Scores p. 64
            d) Predicting Adult Secure Attachment Scale Scores p. 66
            e) Summary of Results From Second Set of Regression Analyses p. 68

V. Discussion p. 72
   A. Predicting Adolescent Styles From Parent-Child Attachment p. 72
   B. Predicting Adult Attachment Styles From Parent-Child Attachment, Adolescent Attachment, and Romantic Relationship Experiences p. 76
      1. Dismissing Adults p. 78
      2. Preoccupied Adults p. 80
      3. Fearful Adults p. 84
      4. Secure Adults p. 84
   C. Stability in Adolescent and Adult Attachment Styles p. 87
   D. Emotional Distress p. 88
   E. Conclusions p. 91
      1. Implications of the Study p. 92
      2. Recommendations for Future Research p. 93

VI. References p. 96

VII. Appendix

   A. Adult Attachment Styles
      1. Hazan and Shaver's Attachment Style Categories p.105
      2. Bartholomew's Attachment Style Categories p.106
   B. Instructions for Students p.107
   C. Close Relationships Questionnaire p.109

D. Betas for Individual Predictors in Significant Regression Analyses p.122
E. Regression Analyses Using the Parental Bonding Instrument p.129

LIST OF TABLES

LIST OF TABLES

I. Comparision of Percentages Between Adolescent, Adult, and Bartholomew and Horowitz' Adult Attachment Styles p. 40

II. Means and Standard Deviations of Adolescent and Adult Attachment Scales p. 41

III. Emotional Distress Means for Adolescent Attachment Styles p. 44

IV. Emotional Distress Means by Who Ended the Relationship p. 45

V. Comparision of the Percentages of Mother and Father Attachment Styles p. 46

VI. Means and Standard Deviations of Mother and Father Attachment Scales p. 47

VII. Means of Care and Overprotection for Mothers and Fathers p. 48

VIII. Care and Overprotection Means for Mother Attachment Styles p. 49

IX. Care and Overprotection Means for Father Attachment Styles p. 49

X. Standardized Regression Coefficients (Betas) for Predictors of Adolescent Dismissing Attachment Scale Scores p. 54

XI. Standardized Regression Coefficients (Betas) for Predictors of Adolescent Fearful Attachment Scale Scores p. 55

XII. Standardized Regression Coefficients (Betas) for Predictors of Adult Dismissing Attachment Scale Scores p. 60

XIII. Standardized Regression Coefficients (Betas) for Predictors of Adult Fearful Attachment Scale Scores p. 63

XIV. Standardized Regression Coefficients (Betas) for Predictors of Adult Preoccupied Attachment Scale Scores p. 65

XV. Standardized Regression Coefficients (betas) for Predictors of Adult Secure Attachment Scale Scores p. 67

XVI. Standardized Regression Coefficients (Betas) for Predictors of Adult Dismissing Attachment Scale Scores (Using the PBI) p. 132

XVII. Standardized Regression Coefficients (Betas) for Predictors of Adult Fearful Attachment Scale Scores (Using the PBI) p. 134

XVIII. Standardized Regression Coefficients (Betas) for Predictors of Adult Preoccupied Attachment Scale Scores (Using the PBI) p. 136

XIX. Standardized Regression Coefficients (Betas) for Predictors of Adult Secure Attachment Scale Scores (Using the PBI) p. 138

LIST OF FIGURES

I. Causal Model of Adult Attachment p. 26

II. Model 1: Predicting Adolescent Attachment Scale Scores From Parent-Child Attachment p. 53

III. Predicting Adolescent Attachment Scale Scores

  A. Predicting Females' Adolescent Attachment Scale Scores From Parent-Child Attachment p. 57

  B. Predicting Males' Adolescent Attachment Scale Scores From Parent-Child Attachment p. 58

IV. Model 2: Predicting Adult Attachment Scale Scores From Parent-Child Attachment, Adolescent Attachment, and Romantic Relationship Experiences p. 59

V. Predicting Adult Attachment Scale Scores

  A. Predicting Females' Current Attachment Scale Scores From Parent-Child Attachment, Adolescent Attachment, and Romantic Relationship Experiences p. 70

  B. Predicting Males' Current Attachment Scale Scores From Parent-Child Attachment, Adolescent Attachment, and Romantic Relationship Experiences p. 71

VI. Predicting Adult Attachment Scale Scores (Using the PBI)

  A. Predicting Females' Current Attachment Scale Scores From Parent-Child Attachment, Adolescent Attachment, and Romantic Relationship Experiences (Using the PBI) p. 141

  B. Predicting Males' Current Attachment Scale Scores From Parent-Child Attachment, Adolescent Attachment, and Romantic Relationship Experiences (Using the PBI) p. 142

CHAPTER 1

INTRODUCTION AND STATEMENT OF THE PROBLEM

Background

In 1987, Hazan and Shaver proposed that the different ways that adults interact in their intimate relationships are rooted in the attachment styles they developed with primary caregivers in early childhood. Attachment styles, or *internal working models*, are generalized representations or organized schematas consisting of attitudes, beliefs, and behaviors regarding the self and others in relationships. These organized schematas provide a basis for obtaining or limiting further information regarding attachment figures' responsiveness (Main, Kaplan, & Cassidy, 1985), therefore individuals' behaviors in relationships are guided by these internalized attitudes and beliefs. As a result, working models are likely to persist in later life even with individuals who treat them very differently from their parents. Some support has been found for the stability of attachment styles from infancy to late childhood (Rothbard & Shaver, 1994), although longitudinal research has yet to study the continuity of early childhood attachments into adulthood. Stability of adult attachment styles has ranged from 57% to 80% over varying lengths of time from eight months to four years (Keelan, Dion, & Dion, 1994; Kirkpatrick & Hazan, 1994; Scharfe & Bartholomew, 1994; Shaver & Hazan, 1993).

However, the development of attachment styles is an active and continuous process (Main et al., 1985), therefore despite the resistance of working models to change, they can still be reshaped by experiences after infancy (Ainsworth, 1989; Bowlby, 1973). For a significant percentage of individuals, attachment styles are not stable over time. Clearly, attachment styles do change over time (over and above the possibility of measurement error), and it is through the experience of model-disconfirming experiences that attachment styles may be shaped into new schemata (Shaver & Hazan, 1993). Bowlby (1983) suggested that attachment styles may not even become stable until adolescence, and Weiss (1982) noted that development of adolescents' attachment styles may prone to significant influences from their romantic relationship experiences. Nevertheless, although Bowlby (1988) suggested that individuals' generalized views can change as a result of accommodating new experiences, little research has directly examined the possible effect of past romantic relationship experiences on current adult attachment styles. Thus, the current research will focus on the role that parent-child attachment and adolescent romantic relationship experiences play in determining adult internal working models or attachment styles.

Theoretical Framework

Infant Attachment

The theoretical framework used for this research is attachment theory. Attachment theory explains how bonds between two individuals develop as a result of interaction, separation, and loss. Bowlby first conceptualized attachment theory after viewing the behaviors of young children and infants when separated from their primary caregivers (Bowlby, 1988). Based on an ethological perspective, which examines the origin, cause, development, and biological purpose of species' behaviors (Hinde, 1983), Bowlby proposed that infants have predictable, genetically determined sets of behaviors (e.g., crying, clinging) which help keep them close to their primary caregivers to help ensure their survival. These behaviors signal infants' caregivers that they need attention for some reason.

The caregiver may respond to the infant's behavior in several ways, such as responding positively and consistently to the child, responding inconsistently to the child, or by ignoring the child. Each of these responses has different implications for the ways that infants' working models of attachment develop. For example, infants whose caregivers consistently ignore their cries for attention may develop a sense that they are not worthy of being responded to and that other individuals can not be trusted to respond to them. On the other hand, infants whose caregivers respond consistently in a caring manner would develop a sense of trust in others and confidence in themselves.

When an infant is feeling secure about her or his relationship with the primary caregiver, she or he uses the primary caregiver as a "secure base" (Ainsworth, Blehar, Waters, & Wall, 1978), feeling free to explore the environment yet returning to the caregiver for support when feeling threatened. Bowlby suggested that the infant develops an internal working model or generalized schemata of the self and others primarily based upon the caregiver's responses to the child.[1] Once built, “these models of a parent and self in interaction tend to persist and are so taken for granted that they come to operate at an unconscious level” (Bowlby, 1988, p. 130). Assimilation of new information (e.g., new experiences with different people and relationships) into the existing working model (Bowlby, 1979) actively strengthens the working model's “staying power”. Thus the bonds created with primary caregivers in early childhood affect individuals' future abilities to make bonds with other individuals (Bowlby, 1979). The theory can be summarized in three propositions:

> The first [proposition] is that when an individual is confident that an attachment figure will be available to [her or] him whenever [she or] he desires it, that person will be much less prone to either intense or chronic fear than will an individual who for any reason has no such confidence. The second proposition concerns the sensitive period during which such confidence develops. It postulates that confidence in the availability of attachment figures, or lack of it, is built up slowly during the years of immaturity- infancy, childhood, and adolescence- and that whatever expectations are developed during those years tend to persist relatively unchanged throughout the rest of life. The third proposition concerns the role of actual experiences. It postulates that the varied expectations of the accessibility and responsiveness of attachment figures that individuals develop during the years of immaturity are tolerably accurate reflections of the experiences those individuals have actually had (Bowlby, 1973, p. 235).

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[1] Hazan and Shaver (1994) state that despite evidence showing that infants have different temperaments such as irritability and sociability, secure or insecure attachments in infants have yet to be reliably predicted from such differences, while secure or insecure attachment can be predicted from caregivers' behaviors. On the other hand, Belsky (1990) states that infants' temperaments need to be considered. Furthermore, Belsky, Fish, and Isabella (1991) found that stability and change in infants' negative affect did contribute to attachment prediction.

A fundamental part of attachment theory deals with how individuals react to loss of, or separation from, their attachment figures (Bowlby, 1980). The goal of attachment is to maintain an affectional bond with, and proximity to an attachment figure. Interruption of this secure state of being results in acute distress because it threatens survival (Bowlby, 1980). Attachment behavior is "goal-corrected" (Bowlby, 1980) in that attachment behaviors seek to correct environmental factors which are impeding the achievement of a desired goal (security or survival). These behaviors become activated when individuals are threatened in some way, and these behaviors are terminated upon response from the attachment figure (Bowlby, 1980).

In an attempt to measure this aspect of attachment, Ainsworth developed the "Strange Situation" experiments. She observed infants' behaviors when separated for a brief amount of time and then reunited with their mothers. Behaviors such as proximity and contact seeking, contact maintaining, resistance, avoidance, search, and distance interaction were noted (Ainsworth et al., 1978). Three major types of attachment styles were identified: avoidant, secure, and anxious/ambivalent.

Avoidant infants did not appear to be particularly distressed during separation and avoided interaction or proximity with their mother when reunited (Ainsworth et al., 1978). Nevertheless, despite this apparent lack of emotional distress, physiological studies have shown that avoidant infants are distressed during separation (Spangler & Grossman, 1993). *Secure* infants were distressed during separation about their mother's absence, actively sought proximity and contact with their mother upon her return, and were readily comforted by their mother (Ainsworth et al., 1978). Finally, *anxious/ambivalent* infants were extremely upset during the separation episode, displayed simultaneous contact-seeking and interaction-resisting behavior towards their mother upon her return, and were not easily comforted (Ainsworth et al., 1978). North American research consistently finds that approximately 65-70% of (middle class American) infants are securely attached, 15-25% are avoidant, and 10-20% are anxious/ambivalent (e.g., Campos, Barrett, Lamb, Goldsmith, and Stenberg, 1983; Schneider Rosen & Rothbaum, 1993).

Bowlby (1983) postulated that attachment styles developed in early childhood tended to persist throughout an individual's life, although they may not become stable until adolescence. As a matter of fact, the period of adolescence may be particularly salient for the development of individuals' working models of attachment (Ainsworth, 1989), as individuals are initiating romantic relationships for the first time. Several studies have provided support for the notion of continuity of attachment styles developed in infancy into the middle childhood years (i.e., 10 years of age) (see Grossman & Grossman, 1991, and Rothbard & Shaver, 1994, for reviews of childhood attachment research). However, the connection between Bowlby's attachment theory and adult attachment was highlighted most compellingly with Hazan and Shaver's 1987 study, in which they found that percentages of the three attachment styles in adults were similar to the percentages identified in infant attachment research. As Bowlby had originally suggested that "attachment behaviour is held to characterize human beings from the cradle to the grave" (Bowlby, 1979, p. 129), this seminal study provided the link with childhood attachment. The groundwork was laid for research into adult attachment.

Adult Attachment

What is adult attachment? Berman and Sperling (1994, p. 8) define it as:

> The stable tendency of an individual to make substantial efforts to seek and maintain proximity to and contact with one or a few specific individuals who provide the subjective potential for physical and/or psychological safety and security. This stable tendency is regulated by internal working models of attachment, which are cognitive-affective-motivational schemata built from the individual's experience in his or her interpersonal world.

Berman and Sperling's conceptual definition shall be used for the purpose of this research. Although the concept of adult attachment is drawn from infant attachment research, it is noted that adult attachment is different from childhood attachment in three ways: (1) sexual attraction is often a part of adult relationships but not of infant-caregiver relationships (Shaver & Hazan, 1988; Weiss, 1982); (2) adult relationships usually involve reciprocal caregiving with peers, whereas infant-caregiver relationships are one-sided in caregiving (Shaver & Hazan, 1988; Weiss, 1982); and (3) attachment is not quite so overwhelming for adults as it is for infants (i.e., adults can tolerate temporary separation and focus on other relationships more effectively than infants) (Weiss, 1982). Nonetheless, adult attachment is also similar to childhood attachment in several ways (Weiss, 1991), such as adults and infants both desiring to be close to their attachment figures, and both adults and infants being upset following unanticipated and undesired separation from their attachment figures (see Shaver & Hazan, 1988, for a complete list of similarities).

Like infant attachment styles, there are different types of adult attachment styles which differ from each other in significant ways: secure, avoidant, and anxious/ambivalent. Individuals with secure adult attachment styles are comfortable in close relationships and trust others; individuals with avoidant attachment styles prefer not to be close to others and do not like others to be dependent on them; individuals with anxious/ambivalent attachment styles want to be close to other people, desire close relationships, but often find that this feeling is not reciprocated (Hazan & Shaver, 1987). Furthermore, it was found that "individual differences in these experiences [adult attachment styles] are related in theoretically meaningful ways to memories of childhood relationships with parents" (Shaver & Hazan, 1993, p. 29).

However, internal working models, despite being resistant to change, can be reshaped by experiences after early childhood (Bowlby, 1973). Past relationships not only include childhood relationships with parents but can also include other relationships, such as adolescent romantic relationships, which the working model assimilates (Rothbard & Shaver, 1994) into its pre-existing schemata.

Summary and Statement of Problem

Individuals seek to have rewarding relationships in their lives, although this goal is not always successfully accomplished. Adult attachment has been shown to be related in meaningful ways to factors such as relationship satisfaction, quality, and communication (Collins & Read, 1990; Feeney, 1994; Feeney, Noller, & Callan, 1994; Pistole, 1989). The conceptual framework of attachment theory is helpful in explaining the development of adult attachment styles and can therefore help us understand why some individuals are not successful in achieving their desires for rewarding intimacy.

The purpose of this research is to examine the role that both parent-child attachment and adolescent romantic relationship experiences play in determining adult internal working models or attachment styles. Therefore, the research question is: what role do childhood internal working models (of parent-child relationships) and adolescent internal working models (of adolescent romantic relationships) and romantic relationship experiences play in determining current internal working models in adult intimate relationships?

Understanding what factors contribute to the development of less satisfying and "unhealthy" adult attachment styles, and how early distressing ways of interacting in relationships may be altered to allow individuals to develop more healthy and satisfying ways of interacting will have both significant theoretical and practical implications. First, it will contribute to our understanding of the continuity and change in attachment across the lifespan. Furthermore, this understanding can be used in clinical settings by counsellors, social workers, and psychologists. Professionals can help individuals gain insight into their behaviors in relationships by examining the effect of past attachments in childhood and adolescence on current working models of the self and others (Bowlby, 1979). When individuals gain insight into their unconscious thought processes, they may then start to make changes toward more positive and satisfying relationships.

CHAPTER 2

LITERATURE REVIEW

In this chapter, a clearer picture of how the research question emerged will be illustrated through a review of the existing literature. The review of literature will focus mainly on adult attachment, with an emphasis on four areas. First, research using Hazan and Shaver's (1987) conceptual model of adult attachment will be presented. Second, research using an alternative conceptual model of adult attachment (Bartholomew, 1990) will be presented. Third, gender differences in the ways that men and women experience various aspects of love will be discussed. Finally, the issues of stability and change in attachment styles will be considered. Following the literature review, the research hypotheses will be presented.

Hazan and Shaver's Model

Hazan and Shaver (1987) reconceptualized adult love as an attachment process using Ainsworth and Bowlby's work as their base. They claimed that romantic love consists of three behavioral systems: sexual mating, caregiving, and attachment (which influences the previous two systems) (Shaver & Hazan, 1988; Shaver, Hazan, & Bradshaw, 1988). Using the theoretical framework of attachment theory, they identified three types of adult attachment styles (secure, anxious/ambivalent, and avoidant) which corresponded to Ainsworth's infant typology, and developed a measure that consisted of these three discrete categories of attachment styles (see Appendix A for descriptions of the three styles used in the measure). Fifty-six percent of their adult participants reported attachment styles that were secure, 19% reported anxious/ambivalent attachment styles, and 25% reported avoidant attachment styles (Hazan & Shaver, 1987). These percentages resembled the percentages of attachment styles identified in infants (cf. Campos et al., 1983). Other studies obtained similar percentages using this discrete measure of attachment (e.g., Collins & Read, 1990; Feeney & Noller, 1990; Humble & Skrypnek, 1994; Mikulincer & Erev, 1991). No gender differences were found in any of these studies. Percentages of males and females in each of the three categories were not significantly different from each other.

Secure individuals were comfortable with closeness and depending on others, and did not fear being abandoned (Collins & Read, 1990). They reported relationships as happy, trusting, supportive, and stable (Feeney & Noller, 1990; Hazan & Shaver, 1987; Simpson, 1990). Anxious/ambivalent individuals were comfortable with closeness, fairly confident about depending on others, yet worried about being abandoned (Collins & Read, 1990). They were characterized by obsession and desire for closeness with their partner, desire for commitment in relationships, emotional highs and lows, extreme jealousy and sexual attraction, and having relationships of short duration (Feeney & Noller, 1990; Hazan & Shaver, 1987; Simpson, 1990). Avoidant individuals were fearful about closeness, preferred not to depend on others, and did not worry about being abandoned (Collins & Read, 1990). They were characterized by fear of intimacy, jealousy, and emotional highs and lows (Feeney & Noller, 1990; Hazan & Shaver, 1987; Simpson, 1990).

Hazan and Shaver also assessed attachment history with parents for each attachment style (using an adjective checklist). Separation from parents or parental divorce was not related to adult attachment styles (Hazan & Shaver, 1987). Instead, they found that the best predictors of these adult attachment styles were respondents' perceptions of their relationships with their caregivers in childhood and their parents' relationships with each other (Hazan & Shaver, 1987). Secure individuals were more likely to report warm relationships with and between their parents (Feeney & Noller, 1990; Hazan & Shaver, 1987) and viewed childhood relationships with their parents as warm and responsive (Collins & Read, 1990). By contrast, anxious/ambivalent individuals saw their fathers as unfair (Hazan & Shaver, 1987) and reported parents as being inconsistent or cold (Collins & Read, 1990) and lacking in supportiveness (Feeney & Noller, 1990). Finally, avoidant individuals viewed their mothers as cold and rejecting (Hazan & Shaver, 1987) and reported childhood relationships that involved distance and distrust (Feeney and Noller, 1990).

Furthermore, Collins and Read (1990) found that for males and females, the description of their opposite-sex parent predicted the attachment dimensions of their partners. This led them to suggest that although both parents may contribute to the development of internal working models, it is the relationship with the opposite-sex parent that may play the most significant role in determining how heterosexual adults view love relationships (Collins & Read, 1990). However, it is noteworthy that Hazan and Shaver (1987) found individuals tended to describe their opposite-sex parent more favorably on positive trait dimensions (e.g., loving) and describe their same-sex parent more harshly on negative trait dimensions (e.g., critical). If this is a bias, opposite-sex parents' impacts on individuals' insecure styles may be masked. On the other hand, it could reflect real differences in the ways mothers and fathers relate to their children, with parents actually treating their opposite-sex child more favorably than their same-sex child.

Individuals with different attachment styles differ in their experiences of relationship satisfaction, quality, commitment, and communication. Heterosexual couples in which females were anxious/ambivalent (high in anxiety) or males were avoidant (low in comfort with closeness) reported lower levels of relationship satisfaction and commitment (Collins & Read, 1990; Feeney, 1994; Kirkpatrick & Davis, 1994). On the other hand, individuals with partners who were comfortable with closeness (i.e., a secure attachment), reported being more satisfied, better marital adjustment, greater intimacy in their relationship, having higher levels of trust in their partner, and better communication than individuals whose partners were not comfortable with closeness (Collins & Read, 1990; Pistole, 1989; Senchak & Leonard, 1992).

Overall, several studies, using Hazan and Shaver's model, found moderate support for the continuity of internal working models from childhood to adulthood (Cohn, Silver, Cowan, Cowan, & Pearson, 1992; Collins & Read, 1990; Feeney & Noller, 1990; Hazan & Shaver, 1987; Simpson, 1990). These studies described three adult attachment styles that were qualitatively different from each other and found that perceptions of early experiences with caregivers were related to the way individuals viewed themselves and others in adult intimate relationships. Furthermore, these attachment styles were related to various relationship factors such as satisfaction, commitment, and communication. Recent research suggests that Bartholomew's (1990) model, using four categories of adult attachment, may be more consistent with Bowlby's conceptual theory than Hazan and Shaver's model.

Bartholomew's Model

Considering Bowlby's original concept of internal working models of the self and others in intimate relationships, Bartholomew (1990, Bartholomew & Horowitz, 1991) proposed a 4-category model of attachment. In developing their model, Bartholomew and Horowitz (1991, p. 227) stated:

> Although Bowlby (1973) suggested that working models differ in terms of images of self and others, no study has considered all four categories that are logically derived by combining the two levels of self image (positive vs. negative) with the two levels of image of others (positive vs. negative).

In doing so, Bartholomew proposed four adult attachment styles: *secure* (similar to Hazan and Shaver's secure style), *preoccupied* (similar to Hazan and Shaver's anxious/ambivalent style), *fearful* (similar to Hazan and Shaver's avoidant style), and *dismissing* (Bartholomew, 1990; Bartholomew & Horowitz, 1991) (see Appendix A for a description of each attachment style). The dismissing and fearful style are alike in that they both avoid intimacy but differ in their view of themselves, therefore resulting in two avoidant styles. Additional research found empirical support for similarities between the Bartholomew's conceptual model and Hazan and Shaver's conceptual model (Brennan, Shaver, & Tobey, 1991).

Using interview audio recordings, raters classified participants into the four categories by rating on a 9-point scale the degree to which individuals corresponded to each of the four prototypes. Participants were then placed in the category in which they had the highest ranking. As a result, 47% percent were classified as secure, 14% as preoccupied, 21% as fearful, and 18% as dismissing (Bartholomew & Horowitz, 1991). Gender differences were found in these ratings, with males scoring higher on the dismissing scale and females having higher ratings on the preoccupied scale (Bartholomew & Horowitz, 1991).

Although Bartholomew's work consists primarily of multiple assessment methods (i.e., interviews not only with respondents but also with their peers and families), she also developed a self-report measure similar to Hazan and Shaver's self-report measure which has been used by several researchers. Duggan and Brennan (1994) found that 43% of the individuals in their study described themselves as secure, 18% as preoccupied, 24% as fearful, and 15% as dismissing. These percentages were comparable to the percentages of individuals categorized into each category based on Bartholomew's interviews. Brennan and his colleagues obtained quite different percentages, with 34% classified as secure, 16% as preoccupied, 40% as fearful, and 13% as dismissing. However their total sample consisted of adult children of alcoholics, which could explain the higher than expected percentage of fearful individuals (Brennan et al., 1991). Further gender differences were found, with females rating themselves higher on the fearful scale and males rating themselves higher on the dismissing and preoccupied scales (Brennan et al., 1991).

Secure individuals, who have a positive view of the self and a positive view of others, had high intimacy in friendships, warmth, balance of control, high levels of involvement in romantic relationships, high levels of confidence, and tended to use others as a secure base (Bartholomew & Horowitz, 1991; Feeney, Noller, & Hanrahan, 1994). Preoccupied individuals, who have a negative view of the self and a positive view of others, had very high self disclosure (to the point of sometimes being inappropriate), emotional expressiveness, use of others as a secure base, high romantic involvement, and were fairly low on self confidence (Bartholomew & Horowitz, 1991; Feeney, Noller, & Hanrahan, 1994). Fearful individuals, who have a negative view of the self and a negative view of others, had high levels of shyness, low levels of self-disclosure, intimacy, romantic involvement, and reliance on others, and low use of others as a secure base when upset (Bartholomew & Horowitz, 1991; Duggan & Brennan, 1994; Feeney, Noller, & Hanrahan, 1994). Finally, dismissing individuals, who have a positive view of the self and a negative view of others, were low on sociability, had reasonable to high self confidence, low emotional expressiveness, and tended not to use others as a secure base (Bartholomew & Horowitz, 1991; Duggan & Brennan, 1994; Feeney, Noller, & Hanrahan, 1994).

Bartholomew and Horowitz (1991) also found evidence that adult attachment styles were related to representations of childhood experiences. Secure individuals realistically reported they had warm, accepting parents, or that they had difficult experiences, yet they had managed to work through these experiences in a positive way, whereas preoccupied individuals reported inconsistent parents and were still struggling for independence from their parents (Bartholomew, 1990; Bartholomew & Horowitz, 1991). Fearful individuals reported parents who were harsh, critical, and rejecting, and dismissing individuals reported either rejecting parents (yet downplayed this) or cool, unemotional parents (Bartholomew, 1990; Bartholomew & Horowitz, 1991).

Bartholomew's model may be a better conceptual fit with Bowlby's theory, as it takes into account the original description of internal working models which are based on views of the self and others in intimate relationships. Considerable research by Griffin and Bartholomew (1994; in press) has found convergent, discriminant, predictive, incremental, and construct validity for the two dimensions underlying the 4-category model. Earlier research by Collins and Read (1990) suggested the possibility of four clusters in their cluster analysis. Furthermore, additional researchers report that classifications can be reduced to two dimensions: secure versus fearful and preoccupied versus dismissing (Shaver & Hazan, 1993) or "comfort with closeness" and "anxiety" (Feeney, Noller, & Hanrahan, 1994).

Two caveats are in order regarding both Hazan and Shaver's model and Bartholomew's model. First, the studies which used self-report measures may be subject to a bias in which respondents wish to present themselves in the best possible manner. The Adult Attachment Interview, developed by George, Kaplan, and Main (1985), elucidates this point. The interview assesses individuals' attachment styles through "descriptions of relationships, specific supportive memories, contradictory memories, assessments of relationships in childhood, and current assessments of the same experiences and relationships" (Main, Kaplan, & Cassidy, 1985, p. 90). In these complex interviews, they found that insecure respondents tended to idealize their parents and past experiences (Main et al., 1985). Furthermore, based on two studies done with different age groups, Hazan and Shaver (1987) concluded that younger avoidant subjects were more defensive about their relationships with parents (i.e., more reluctant to admit rejection) than older individuals. These findings suggest that self-report measures may not be able to capture the true nature of parent-child attachment, most notably for insecure individuals. The second concern regarding these studies is that they were retrospective in nature. Individuals may not be able to remember early relationships accurately (Hazan & Shaver, 1987).[2] Retrospective and correlation studies, although providing helpful insight into relationships, are troublesome because causal directions can not be determined (Carnelley & Janoff-Bulman, 1992).

Of interesting final note is that sex differences were found using Bartholomew's four categories, whereas sex differences were not found using variations of Hazan and Shaver's self-report measure. The next section shall address this issue in greater detail.

Love and Gender

Previous research on love has found differences in the way that men and women love. Z. Rubin, Peplau, and Hill (1981) found several sex differences in college dating couples that, while not being large, nevertheless, suggested that socialization has an effect on the way individuals love. Men fall in love faster and are rejected by potential partners more often than women, women are more discriminating, women fall out of love faster and end relationships more often than men, men are hit harder by break-ups, and women's levels of love are stronger predictors of whether or not relationships will end (Baumeister, Wotman, & Stillwell, 1993; Z. Rubin et al., 1981). Additionally, women were more likely than men to report being changed in a negative as the result of unrequited love (Baumeister et al., 1993).

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[2] Although, on the other hand, one will recall that Bowlby's third proposition of attachment theory states that the perceptions individuals have of the accessibility of their attachment figure in early childhood are assumed to be relatively accurate perceptions of what actually occurred.

Differences in the ways that females and males love have been found using Hendrick and Hendrick's (1986) measure (Love Attitudes Scale) of Lee's colors of love. Men report more ludic love, and women report more manic, storgic, and pragmatic love (Hendrick & Hendrick, 1986; Hendrick, Hendrick, Foote, & Slapion-Foote, 1984). On the other hand, Cunningham and Antill (1981) found that, contrary to popular belief, men are more romantic than women and women are more pragmatic than men. Bailey, Hendrick, and Hendrick (1987) had individuals rate themselves as highly masculine, highly feminine, or androgynous (using the Bem Sex Role Inventory). They investigated the relationship of gender and sex with the Love Attitudes Scale (Hendrick & Hendrick, 1986), Sexual Attitudes Scale (Hendrick et al., 1985), and Rosenberg's Self Esteem Scale, finding twice as many main effects (10) for gender than for sex (5). For example, ludic love was positively related to masculinity and negatively related to femininity (Bailey et al., 1987). They concluded that "gender role orientation is strongly related to love and sexual attitudes" (Bailey et al., 1987, p. 645).

In light of such previous findings, it was very interesting when no sex differences were found between the percentages of males and females in each of the three attachment styles in any of the studies using Hazan and Shaver's model of adult attachment (Collins & Read, 1990; Feeney & Noller, 1990; Feeney, Noller, & Patty, 1993; Hazan & Shaver, 1987; Humble & Skrypnek, 1994; Mikulincer & Erev, 1991). On one hand, it seems reasonable to assume that there would be no sex differences in infant attachment styles because infants have not had much gender socialization. On the other hand, the years between infancy, adolescence, and adulthood are a time when boys and girls are bombarded with messages about what it means to be male or female. This must surely count for some influence. It is generally supported that gender socialization is different for females and males (Mei-ha Wong & Csikszentmihaliyi, 1991). L. Rubin states, "cultural ideals are powerful forces, shaping not only our ways of thinking and doing but our ways of being as well, giving form to both the conscious and unconscious content of our inner lives" (1983, pp. 2-3). Therefore, one would expect some differences, especially when the description of the anxious/ambivalent style corresponds to a stereotypical image of females' loving styles and the dismissing style corresponds to a stereotypical image of males' loving styles (Pietromonaco & Carnelley, 1994).

In adult attachment research using Hazan and Shaver's model, several studies found sex differences when examining the self-report measure's relationships with other variables. First, anxious/ambivalent women and avoidant men experienced less satisfaction in relationships or even when thinking about hypothetical relationships (Feeney, Noller, & Callan, 1994; Kirkpatrick & Davis, 1994; Pietromonaco & Carnelley, 1994). This suggests that individuals who corresponded most highly to gender-role stereotypes, such as anxious/ambivalent females or avoidant males, may have less rewarding relationships. Second, females' attachment styles were related to both their own reflections and their partners' reflections about their intimate relationships, whereas males' attachment styles were only related to their own reflections on their relationships and did not take into account their female partner's views (Kirkpartrick & Davis, 1994). This finding corresponds to the stereotypical view of women being more reflective about relationships than men. Third, avoidant men experienced significantly less emotional distress (than all other combinations of attachment style and sex) following relationship dissolution (Simpson, 1990), corresponding to the stereotypical view of males as desiring independence rather than relationships. On the other hand, when examining three attachment dimensions (close, depend, and anxiety), Collins and Read (1990) found that males were more comfortable with getting close than females were, suggesting that males are more comfortable in relationships than previously thought.

Hazan and Shaver's three attachment styles were compared to Lee's loving styles, as operationalized by Hendrick and Hendrick's measure (Humble & Skrypnek, 1994; Levy & Davis, 1988). When females and males were analyzed together as a group, eros and agape were positively related to the secure style and negatively related to the avoidant style, ludus was positively related with the avoidant style and negatively related to the secure style, and mania was positively related to the anxious/ambivalent style (Levy & Davis, 1988). However, Humble and Skrypnek (1994) found sex differences within the attachment styles. Avoidant and anxious/ambivalent males and females appeared to experience love in similar ways (Humble & Skrypnek, 1994).

However, the experience of secure love was quite different for women and men. For males, the secure style was only positively related to eros. On the other hand, for females, the secure style was positively related to not only eros but also to agape and storge, and negatively related to mania and ludic love. They proposed that gender role socialization may modify insecure attachment styles and may also significantly impact the development of secure styles for females and males (Humble & Skrypnek, 1994).

As noted in the previous section, research using Bartholomew's (1990) model has found gender differences. Interestingly, the differences have been contradictory. Using interview ratings, females scored higher on the preoccupied style of attachment and males scored higher on the dismissing style of attachment (Bartholomew and Horowitz, 1991; Scharfe, 1992; Scharfe & Bartholomew, 1994), a finding consistent with previous research noting that women appear to focus more on relationships than men. On the other hand, using Bartholomew's self-report measure, Brennan and his colleagues (1991) found that more males than females were dismissing (19% versus 6%) and preoccupied (19% versus 13%), and that more females than males were fearful (43% versus 32%). They suggested that dismissing avoidants are more likely to be males (because they believe they do not need relationships) and that fearful avoidants are more likely to be females (because they both desire and fear relationships) (Brennan et al., 1991). However, these researchers did not expect that the finding of more males in the preoccupied scale would replicate across future studies. Yet in a different study, Duggan and Brennan (1994) found that males scored higher on the dismissing scale and again on the preoccupied scale, and females scored higher again on the fearful rating. Results appear to be inconsistent (using Bartholomew's model) across methods but consistent within researchers. Clearly, more research is needed in this area, as the findings to date are contradictory although intriguing.

The findings of sex differences with Bartholomew's model and in other adult attachment research is noteworthy because it points to the possibility of gender socialization having an impact on the way women and men love and relate to each other. Men and women appear to have different experiences in love and relationship loss. In summary, several studies point to the possibility that "feelings about relationships are linked both to individuals' working models and their gender" (Pietromonaco & Carnelley, 1994, p. 78).

Stability and Change in Attachment Styles

Do our first attachment experiences result in internal working models that determine our relationship styles for the rest of our lives? According to Bowlby (1973), internal working models, although resistant to change, can be reshaped by experiences after early childhood. For example, a previously secure child may become insecure if their primary caregiver dies and they are forced to live with a cold and distant relative. On the other hand, an insecure child may develop a more secure style of attachment with the help of a mentor (Ainsworth, 1989), in the form of another relative, athletics coach, teacher, or friend, for example. This section reviews empirical evidence which provides support for the stability of attachment styles and then considers how attachment styles can be altered or changed through various relationship experiences.

Stability

Most longitudinal studies of adult attachment stability have used self-report measures. For Hazan and Shaver's model, stability has been recorded as 80% over four months, 78% over one year, and 70% over four years (Keelan et al., 1994; Kirkpatrick & Hazan, 1994; Shaver & Hazan, 1993). With Bartholomew's model, moderate stability has also been found. Ratings on the self-report measure had moderate stability over two months, with stability of the secure rating at .71, fearful rating at .64, preoccupied rating at .59, and dismissing rating at .49 (Bartholomew, 1989, cited in Scharfe & Bartholomew, 1994). Overall stability of the four attachment styles over eight months ranged from 59% for self-report methods and 70% for partner-report methods to 77% for interview ratings (Scharfe & Bartholomew, 1994).

However, changes have also been found in attachment styles. For example, 22% of attachment styles changed over a time period of one year (Shaver & Hazan, 1993), therefore attachment styles may not be as stable as researchers usually interpret them to be. Most changes were in the direction of security rather than insecurity (98% versus 2%) (Hazan, Hutt, and Markus,1991, cited in Shaver & Hazan, 1993). Shaver and Hazan (1993) claim that change is more inclined to be toward security rather than insecurity.

However, in contrast to Shaver and Hazan's assertion, Scharfe and Bartholomew (1994) found no evidence of attachment style change in the direction of security over insecurity. Nevertheless, it is evident from the stability percentages that change can occur, and it is how this change can possibly occur that will now be addressed.

Change

What has the potential to reshape internal working models of attachment? Little research has actually examined the effect of past romantic relationships on current views about relationships. Carnelley and Janoff-Bulman (1992) investigated how experiences in the family of origin and recent romantic relationships affected undergraduate college students' levels of optimism about relationships and marriage. Individuals who had been in love in the past, had not experienced unrequited love, and were not anxious/ambivalent were most likely to be optimistic about future love relationships (Carnelley & Janoff-Bulman, 1992). A hierarchical regression analysis revealed that 5% of variance in optimism about future love relationships was accounted for by parent/child relationships (measured by Epstein's Mother, Father, Peer Scale), 9% by past relationships, and 12% by current attachment styles (measured by Hazan and Shaver's revised 13-item measure of adult attachment) (Carnelley & Janoff-Bulman, 1992). To understand more clearly how past relationships affect individuals' working models of attachment, these relationships need to be explored in greater detail. Furthermore, because adolescent dating may lead to behavioral patterns which may be maintained in adult intimate relationships (Rice, 1984), the impact of adolescent romantic relationships (and reaction to their dissolution) on adult attachment styles needs to be explored further.

Adolescent Relationships

Dating relationships occur in many different forms. Some may be brief and transient; others may be more intense and longer lasting. They may also begin in early adolescence or late adolescence. Several studies have examined adolescents' dating relationships (Paul & White, 1990), however the majority of studies have not used the framework of attachment theory.

Ainsworth notes that adolescence is a time where a major shift in internal working models may occur (1989), because the seeking out of romantic partners in adolescence (usually in the form of opposite-sex individuals) involves a shift in the three behavioral systems (sexual mating, caregiving, and attachment). Late adolescence is a time when peer attachments are starting to characterize the types of attachment that are typically found in adult relationships (Shaver & Hazan, 1993). Furthermore, Bowlby (1973) suggested that attachment styles do not become stable until adolescence. The salience of adolescent relationships becomes more clear when considering Weiss' speculation that adult attachment bonds appear after parents have been relinquished as attachment figures (1991). Adolescence is a time when adolescents are striving for independence from their parents, therefore development of their attachment styles may be prone to significant influences from romantic relationships.

The various dynamics of adolescent romantic relationships may provide the opportunity to revise working models of the self and others. These relationships are especially important as they precede or may evolve into committed adult romantic relationships. However, there is little exploration of the importance of adolescent relationships. To the best of my knowledge, Feeney and her colleagues are the only researchers to study adolescent romantic relationships within the context of attachment theory (Feeney et al., 1993). Using Hazan and Shaver's model, they had adolescents fill out questionnaire measures on attachment style, relationship history, and attitudes towards sex. Several significant findings emerged. First, 53% of adolescents were classified as being secure, 32% as avoidant, and 15% as anxious/ambivalent (Feeney et al., 1993). The somewhat higher percentage of avoidant teenagers and lower percentage of secure teenagers in this study compared to previous percentages of adult attachment styles is noteworthy. It is possible that the difficulty and hesitancy of initiating romantic relationships for the first time and the transient nature of these relationships might influence adolescents to be less inclined to even enter into romantic relationships. In line with this thought, a high percentage of avoidant adolescents were currently not dating anyone (Feeney et al., 1993).

Second, avoidant adolescents were most likely to have not been in love or to describe relationships as having low levels of intensity of love (Feeney et al., 1993). Third, anxious/ambivalent adolescents reported the least enduring and highest number of relationships (Feeney et al., 1993). Finally, avoidant female adolescents and anxious-ambivalent male adolescents were least likely to engage in intercourse, suggesting a joint influence of gender socialization and attachment styles on sexual relations (Feeney et al., 1993).

Are these adolescent attachment styles a continuation of previous attachment styles internalized from infancy (perhaps strengthened or altered by the adolescent experience) or are they a function of the adolescent relationship itself? It seems reasonable to expect that parent-child attachments would affect attachment styles in adolescent romantic relationships, and that adolescent romantic relationship experiences could alter internal working models. These altered working models of attachment would then be carried into adulthood.

Relationship History

Various factors related to relationships and relationship loss may also impact the development of adult attachment styles (Feeney & Noller, 1992). First, the loss or ending of significant relationships has implications for revisions of internal working models. Weiss (1982, pp. 180-181) states:

> In adolescence attachment is for the first time directed to nonparental figures. This means that it may be in adolescence that attachment behavior in relationships other than those with parents is at its strongest and the loss associated with the ending of these relationships at its most painful.

Adolescents are relinquishing parents as primary and exclusive attachment figures and forming new ones with romantic partners. Idealism and emotional intensity, two characteristics of adolescent relationships (Levesque, 1993), may intensify the importance of romantic relationships for adolescents. If they are at a point in their lives where the loss of the stability of those new romantic relationships would have a profound effect on their internal working models, the significance of ended adolescent romantic relationships is important and warrants further study. Are teens resilient enough to easily recuperate from the loss of a relationship, or is the influence of failed teen relationships on adolescents' internal working models a major one? Factors such as the dynamics of the relationship, who ended it, and how individuals dealt with the loss will likely influence how relationship termination contributes to the development of internal working models.

The case of unrequited love, a situation that is commonly experienced in late adolescence and early adulthood (Baumeister et al., 1993), can produce a range of possible feelings that in turn could affect how individuals feel about themselves and about others. Those who end a relationship and those whose partners end the relationship both experience different feelings regarding the termination (Hill, Rubin, Peplau, 1976; Sprecher, 1994). Individuals who want relationships but whose feelings are not reciprocated may experience feelings ranging from extreme joy to humiliating heartbreak, whereas individuals who end relationships may experience annoyance, frustration, and grief over inflicting emotional pain on the other individuals (Baumeister et al., 1993). Internal working models would likely affect individuals' reactions to the unrequited love or relationship loss, however such experiences could also be assimilated into an individual's working model of attachment. Consistent with attachment theory, both processes could be occurring simultaneously.

Four studies looked at the effect of relationship loss on individuals, with results indicating that relationship loss has an impact on individuals' working models of attachment. The experience of unrequited love was negatively related to optimism about future love experiences, and potential lovers reported that they felt they had been changed in more negative ways by the experience of unrequited love than individuals who had been in the role of the "rejecter" (Baumeister et al., 1993; Carnelley and Janoff-Bulman, 1992). Individuals with avoidant attachment styles experienced low amounts of emotional distress following relationship dissolution when compared to other attachment styles, and avoidant males experienced the lowest amount of distress when compared to all other attachment style and sex combinations (Feeney and Noller, 1992; Simpson, 1990). On the other hand, anxious/ambivalent individuals experienced high amounts of "upset" (Feeney and Noller, 1992).

Feeney and Noller's part-retrospective and part-prospective study not only explored reactions to relationship loss, but also other various aspects of romantic relationship histories. They did not find a relationship between attachment styles and perception of who ended the relationship, but they did find that that individuals who had experienced relationship termination reported lower levels of security and trust and higher levels of avoidance and perceived risk in intimacy (Feeney & Noller, 1992). Finally, there was no relationship between relationship dissolution and perception of attachment style.

Although adult attachment styles have been shown to have stability, alteration of working models can occur. Adolescence is a time when individuals are forming romantic relationships for the first time, and such relationships may be particularly salient in the development of attachment styles. Reactions to the loss of such relationships may have an equally significant impact on the development of attachment styles. Finally, "attachment style differences may be reflected in several aspects of the process [relationship dissolution]; for example, perceptions of who initiated the break, emotional reactions, and postdissolution dating behaviour" (Feeney & Noller, 1992, p. 69). Therefore, the role of postdissolution dating behaviour is also an area that needs to be studied further. Various factors such as the number of romantic partners individuals have, the number of times they perceive their heart to have been "broken", and the length of their relationships may provide opportunities for either solidifying or reorganizing their working models of attachment.

Purpose of Study and Hypotheses

Based on the literature review, several gaps have been identified. Studies using both Hazan and Shaver's model and Bartholomew's model of adult attachment have identified attachment styles that are different from each other in their (1) relationship to early childhood experiences with caregivers, (2) current intimate relationship experiences, and (3) reported levels of relationship satisfaction, quality, commitment, and communication. Regarding childhood experiences, Collins and Read (1990) suggest that opposite-sex parents may have a strong effect on their children's working models of heterosexual romantic relationships. Retrospective studies have found moderate support for the claim that adult attachment styles are related to parent-child attachment. However, despite no direct evidence of continuity from parent-child relationships to adult relationships, "it is possible to predict developmental pathways that may lead to specific patterns of problems in adult personal relationships" (Bartholomew, 1993, p. 31).

Relationship experiences beyond infancy may have a mediating effect on individuals' generalized views of relationships. Although adult attachment styles have moderate stability, research has also shown that certain relationship experiences may further impact or alter working models. Despite adolescence being a period in which romantic relationships may have a strong influence on attachment style development, little research has studied adolescent dating or reactions to the loss of adolescent relationships within an attachment framework. Postdissolution dating patterns are also areas that needs to be studied further, as these experiences may also impact internal working models of the self and others.

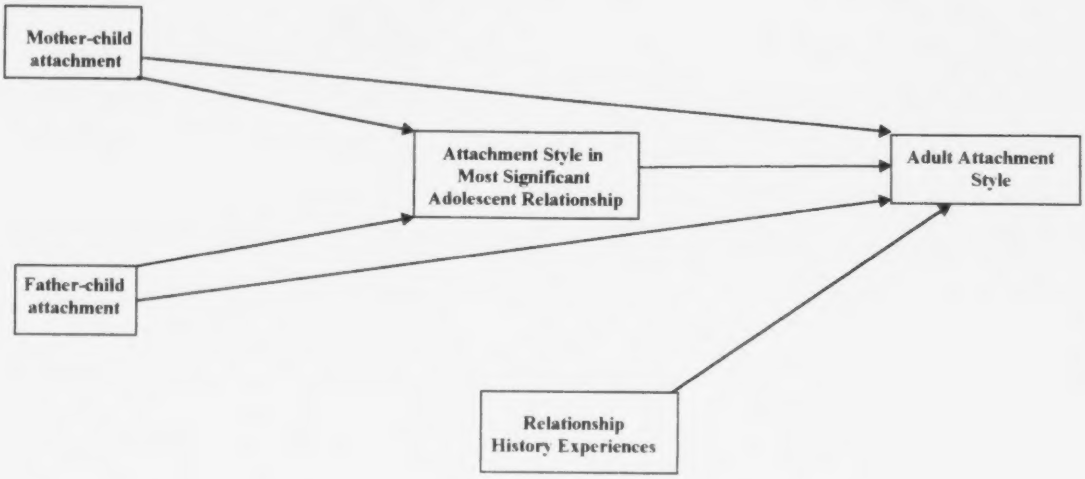
Most adult attachment research has used Hazan and Shaver's 3-category model of attachment. Bartholomew's 4-category model is an increasingly used conceptualization of adult attachment, however it has not been used in adolescent romantic relationship research. Bartholomew's model appears to be a closer fit with Bowlby's original conceptualization of internal working models of attachment. Gender differences have been found using Bartholomew's model. Yet, the gender differences are inconsistent, therefore more research is needed in this area. Nevertheless, findings point to the possibility of gender socialization having an impact on females' and males' attachment styles.

The multiple effects of sex of individual, attachment to a particular caregiver, attachment style, and relationship history may uncover differences that could lend further understanding to how and why individuals act differently in adult intimate relationships. Since adolescent relationships are experiences which could significantly affect internal working models, the purpose of this research is to examine the roles that both parent-child attachment and adolescent romantic relationship experiences play in determining adult internal working models or attachment styles. The conceptual hypotheses derived from gaps in the literature will now be addressed. Figure 1 illustrates the proposed causal model of these relationships.

1. Parent-child (mother and father) attachments will predict adolescent attachment styles.
    1 a) Attachment with the opposite-sex parent will account for more of the variance in predicting the adolescent attachment style of the respondent than attachment with the same-sex parent.
2. Adolescent attachment styles in the most significant adolescent romantic relationship will predict adult attachment styles.
3. Relationship history experiences (emotional distress, number of times respondent's heart was broken, duration of respondent's longest adolescent romantic relationship, number of individuals who loved the respondent, number of romantic relationships, number of times respondent broke someone else's heart, and number of people respondent loved) will predict adult attachment styles.
4. Parent-child (mother and father) attachments will predict adult attachment styles.
    4 a) Attachment with the opposite-sex parent will account for more of the variance in predicting the adult attachment style of the respondent than attachment with the same-sex parent.
5. The contribution of parent-child attachment to prediction of adult attachment styles will be less than the contribution of adolescent attachment to prediction of adult attachment styles.
6. Emotional distress level will be related to the adolescent attachment style identified for the most significant adolescent romantic relationship.

Figure 1

Causal Model of Adult Attachment


Mother-child attachment
Attachment Style in Most Significant Adolescent Relationship
Adult Attachment Style
Father-child attachment
Relationship History Experiences

CHAPTER 3

METHODOLOGY

DESIGN

The proposed study was correlational as all measures were taken at the same time. The relationships among variables (mother-child attachment, father-child attachment, adolescent attachment, and relationship history) and their ability to predict adult attachment styles were examined. The data were collected using a questionnaire that consisted of self report measures.

SAMPLING PROCEDURE

As part of a class research project, students in the 1994 FAMILY STUDIES 215 (Relationship Development) course at the University of Alberta were provided with two copies of a 13-page questionnaire that asked about parent-child relationships, adolescent relationship experiences, and current ways of relating in relationships.

They were asked to give the questionnaire to one male and one female between the ages of 18 to 25 years of age who was neither currently enrolled in the FAM 215 class nor had taken it the previous year.[3] Only individuals aged 18-25 were asked to participate because adolescent relationship experiences would have been relatively recent, therefore hopefully reducing memory problems and the amount of reconstruction of memory. An equal number of males and females was desired to allow for testing sex differences and to employ regression analysis separately for each sex.

Student participation in collecting the data was voluntary. Students received credit for participating in the research project regardless of whether or not they collected data. After analysis of the data, results were presented back to the class. Students were then required to write a paper briefly summarizing and explaining the major findings. Credit was obtained for collecting data and writing a report, or solely for writing the report. Appendix B contains the instructions students received for their class research project.

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[3] Students who were currently in the course were not allowed to participate as they were acting as co-researchers and were aware of the hypotheses. Students who had taken the course the previous year were also excluded from participation because of course content on adult attachment which could have biased or affected their responses.

One hundred and ninety one students collected two questionnaires each. Two students only collected one questionnaire each, one student collected three questionnaires, and three students chose the option of not collecting any data. As a result, 194 students obtained a final sample of 387 respondents.

All respondents were asked to respond anonymously, seal the questionnaire in the provided envelope, and return the completed questionnaire within two weeks. Respondents returned the questionnaires in one of three ways: (1) having their student contact return it, who then returned it to the professor of the FAM 215 course, (2) through campus mail, or (3) through the regular mail system. The majority of the questionnaires were returned through the first method.

The questionnaire consisted of Bartholomew's 4-category measure of adult attachment (1990); an adaptation of Bartholomew's measure to assess the attachment style during an individual's most significant adolescent romantic relationship; the Parental Bonding Instrument (Parker, Tupling & Brown, 1979); an adaptation of Bartholomew's measure to assess parent-child attachment; and a number of relationship history questions including the Emotional Distress Index (Simpson, 1990) and several demographic questions (see Appendix C for a copy of the questionnaire). Throughout the questionnaire, certain words and phrases ("romantic relationship", "significant romantic relationship", "love relationship", "in love", and "love") were used despite the lack of a clear definition for each term. Some of these terms (i. e., close romantic relationship) are consistent with previous adult attachment research (Bartholomew & Horowitz, 1991; Hazan & Shaver, 1987), whereas other terms (i.e., in love) were developed by the researcher. The intention of using such "lay-person" terms was to get respondents to think of intimate relationships that were more than just friendships. Furthermore, these terms were deliberately not narrowly defined because individuals would interpret the terms differently depending on their attachment style. For example, it would be expected that an individual with a preoccupied attachment style might characterize a relationship as being very important to them, whereas an individual with a dismissing attachment style might not even label a similar relationship as a significant one. The following section describes the measures in greater detail.

MEASURES

Adult and Adolescent Attachment

The majority of previous research has operationalized adult attachment using Hazan and Shaver's (1987) 3-category measure of adult attachment (anxious/ambivalent, avoidant, and secure). This study used Bartholomew and Horowitz' Relationship Questionnaire, which consists of descriptions of their 4-category model of adult attachment (1991). It was felt that this was a better operationalization of the construct of internal working models than the 3-category model (as described in the literature review). Bartholomew's measure describes four types of attachment styles (dismissing, preoccupied, fearful, and secure) based on different views of the self (positive or negative) and others (positive or negative) in intimate relationships.

First, participants were asked to choose the category which best described their way of relating in intimate relationships; second, they were asked to rate on a 7-point scale the extent to which each description best characterized them (see p. 111 in Appendix C). For the purposes of this research, both direct measurement (using the forced choice part of the measure) and indirect measurement (using the scale scores) of categories were used (Griffen & Bartholomew, 1994).

This measure was used twice. The original measure was unaltered when asking about adult attachment, and slight changes were made to the wording when asking about adolescent attachment. Griffen and Bartholomew (1994) have stated that this relationship questionnaire can be worded in terms of general experiences or more specific relationships. To obtain a current picture of individuals' general ways of relating in romantic relationships, the measure was worded in the present tense and individuals were asked to think about their general experiences with love partners. To obtain a picture of how individuals viewed their most important adolescent romantic relationship, the measure was worded in the past tense and asked participants to think about the specific person with whom they had their most significant adolescent romantic relationship (see p. 112 in Appendix C).

Reliability of ratings from the self-report measure has not been discussed in previous research. However, reliability of prototype ratings from attachment interviews (which the self-report measure is related to) have been tested by Bartholomew and Horowitz (1991), with alpha coefficients ranging from .87 to .95. Further research by Scharfe (1992) resulted in alpha coefficients ranging from .85 to .93.

Griffen and Bartholomew (1994; in press) discuss the validity of their measure in detail. Convergent validity for the two dimensions was shown through moderately high correlations between the self-report measure and other methods (.34 with the family interview and .39 with the peer interview). Discriminant validity was evident through relatively small correlations between the dimensions of the self and others (.03). The non-significant correlation between the two dimensions showed that the dimensions were measuring different aspects of internal working models. Furthermore, in 3 studies using 5 different methods, strong support for the construct validity was found "by relating each latent attachment dimension to a theoretically dictated outcome variable" (Griffen & Bartholomew, in press).

The major strength of this measure is that it includes the key theoretical aspects of internal working models, which are the dimensions of the self and others. A grouping strategy (using categories) allows one to observe for qualitative differences in attachment styles, however its weakness is also in its typology, as individual variance is lost when categorical measures are used (Griffen & Bartholomew, 1994).

Emotional Distress

Loss to an attachment figure activates the attachment system, eliciting thoughts and behaviors to regain a sense of security. Losing that sense of security could likely result in negative affect reactions. Therefore, to assess the level of negative affect or psychological distress individuals experienced following the dissolution of their most relevant adolescent romantic relationship, Simpson's (1987) Intensity and Duration of Emotional Distress Index was used.

This is a 7-item measure designed specifically to measure individuals' emotional distress following romantic relationship dissolution (see p. 113 in Appendix C). Individuals responded to the first three questions using a rating scale of 1 (not at all) to 7 (a great deal/extremely) and responded to the next three questions using a scale of 1 (no time at all) to 8 (more than two months) (e.g., how long did the break-up disrupt your typical, everyday functioning and routine?).

The first six items were aggregated into a single score (Simpson, 1987, 1990). Scores can range from 6 to 45, with a higher score indicating greater emotional distress. In terms of the measure's reliability, Cronbach's alpha ranged from .87 to .91 for internal consistency in two separate studies (Simpson, 1987, 1990). The seventh question in the Emotional Distress Index asked who ended the relationship and is not used in calculating the emotional distress level (Simpson, 1987).

Two additional questions (added by the researcher) on the same page provided further information about the ended relationship (the duration of the relationship and the age of the respondent when the relationship ended) (see p. 113 in Appendix C). These questions were also not included in calculating the emotional distress level.

Parent-Child Attachment

Mother-Child and Father-Child Attachment

To assess respondents' current working models of past parent-child relationships, or to assess individuals' recollections of their parents' ways of relating to them as children, four descriptions of parent-child attachment styles were developed by the researcher. The purpose of developing these categories was to allow for comparison with Bartholomew's (1990) descriptions of the four adult attachment styles.

Following Bowlby's assumption that parental caregiving reflects early childhood attachment, caregiving styles of mothers and fathers were labeled similarly to the four adolescent and adult attachment style descriptions in this research. Therefore a mother whose caregiving style would theoretically influence a child to have a dismissing attachment style, also had her caregiving style labeled as "dismissing", and so on for the other three styles. These labels allowed for easy comparison, although one could argue that the term "parent-child attachment" is not the most accurate phrase to describe this construct.

The measure was structured similarly to Hazan and Shaver's Descriptions of Parental Caregiving Styles (cited in Collins & Read, 1990), however it included descriptions corresponding to Bartholomew's four styles rather than Hazan and Shaver's three styles. The descriptions were developed from Bartholomew's descriptions of family-attachment group prototypes (1991) of the type of caregiving individuals with each of the four attachment styles would likely have received.

The measure was a categorical one designed to assess individual's perceptions of their parents' caregiving. Identical to the measures on adult and adolescent attachment, participants were first asked to choose the category which best described their perception of their parent's caregiving style. Second, they were asked to rate on 7-point scales the extent to which each description best characterized their parent. It was completed once for mothers and a second time for fathers. For those individuals who did not get to know their mother or father due to divorce, separation, or death, they were asked to respond if they had someone who had acted as a "substitute" for their mother or father (i.e. foster parent, uncle, or grandparent). If there was no "substitute", they were asked to leave the section blank (see pp. 118-119 in Appendix C).

The same advantages and disadvantages of the Relationship Questionnaire also apply here. That is, when using categorical data, qualitative differences may be noted, however within-group variance can be lost (Griffen & Bartholomew, 1994).[4]

Parental Bonding Instrument

A second measure of parent-child attachment was included in the questionnaire. Parker, Tupling, and Brown's (1979) Parental Bonding Instrument is a 25-item measure designed to examine the contributions of parental caregiving to the bond between children and their parents (see pp. 114-117 in Appendix C). The measure contains questions which relate to parental caregiving dimensions of care and overprotection. Although the parental bonding instrument can be used in a variety of ways such as using raw scores or independent instrument items (Parker et al., 1979), the method used in this research was to examine the two dimensions of care and overprotection.[5] Care scores could range from 0 to 36 and overprotection scores could range from 0 to 39.

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[4] Use of scale scores (for parent attachment, adult attachment, and adolescent attachment) in the regression analyses, however, allowed for this complex within-groups variance to be retained. This will be described in greater detail in the results chapter.

The Parental Bonding Instrument has been used widely with both clinical and non-clinical groups, and with groups from different countries (e.g., Australia, Canada, the Netherlands, USA, Sweden). This measure has been tested extensively in terms of its reliability and validity. In the original study, the two dimensions had high test-retest reliability (care: $r = .76$, $p < .001$; overprotection: $r = .63$, $p < .001$) and high split-half reliability (care: $r = .88$, $p < .001$; overprotection: $r = .74$, $p < .001$) (Parker et al., 1979). Studies by other researchers found similar correlations for test-retest and split-half reliability (Parker, 1989). Test-retest reliability scores have been for time periods ranging from four weeks to ten years, with scores being "remarkably stable over time" (Parker, 1989, p. 322).

The measure has been tested in terms of its concurrent, construct, and predictive validity. In the original study, two of the researchers jointly interviewed participants and then assigned a care and overprotection score for each of the respondents. These scores were then correlated with care and overprotection scores on the Parental Bonding Instrument. Correlations on the care dimension ranged from .77 to .78 ($p < .001$) and correlations on the overprotection dimension ranged from .48 to .51 (Parker et al., 1979), thus suggesting appropriate concurrent validity of the measure for perceived parenting. Saranson (1987, cited in Parker, 1989) found concurrent validity for *perceived* parenting also between the parental bonding instrument and other social support measures. Further validity studies with siblings rating their parents on the instrument showed support for the concurrent validity of *actual* parenting (Parker, 1989).

Perceptual distortions of moods (i.e., depression) and social desirability have not been found to affect scores on care or overprotection, contributing to its construct validity (Parker, 1989). Finally, several studies looked at the capacity of the parental bonding instrument to predict future outcomes such as psychiatric disorders (Parker, 1989), and found that the instrument had predictive validity.

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[5] The care dimension consisted of items 1, 2, 4, 5, 6, 11, 12, 14, 16, 17, 18, and 24 on the instrument. The overprotection dimension consisted of items 3, 7, 8, 9, 10, 13, 15, 19, 20, 21, 22, 23, and 25 on the instrument.

Relationship History and Demographic Questions

In addition to the Emotional Distress Index, additional questions concerning past romantic relationship experiences were asked (see p. 120 in Appendix C). First, four questions were asked about romantic relationship loss or unrequited love (number of times respondent's heart was broken, number of times respondent broke someone else's heart, number of individuals who loved the respondent, and number of people respondent loved). Three questions recorded the duration of the respondent's longest adolescent relationship, total number of times in love, and the respondent's age when she or he had her or his first significant adolescent romantic relationship. A further question asked respondents to rate on a scale of 0 (not at all) to 4 (extremely) the extent to which they felt their current ideas about love had been influenced by their past romantic relationships.

Three questions asked the (1) sex, (2) age, and (3) sexual orientation (heterosexual, bisexual, or lesbian/gay) of respondents. Individuals were asked to specify their relationship status from a list (married, seeing one person exclusively, seeing more than one person, not seeing anyone but looking, not seeing anyone and not looking, or other). If they were currently in a relationship, they were asked to state the length of that relationship. Finally, respondents were asked if they had ever been divorced.

ETHICAL ISSUES

Before agreeing to respond to the questionnaire, prospective participants were informed that the study was examining how relationships with parents during childhood and adolescent love experiences may affect the way individuals love as adults. They were informed that the questionnaire would take about 30 minutes to complete and it included questions on their current style of loving, adolescent love experiences, the nature of their relationships with their parents when they were children, and some basic demographic questions. They were also told that participation was voluntary and that after looking at the questionnaire they could decide to withdraw. As is standard in survey research, completion of the questionnaire and its return was considered consent. Respondents did not put their name or any other identifying information on completed questionnaires. Questionnaires were also returned in sealed envelopes, and all questionnaires were identified by a code number only.

Because the research dealt with reflecting on relationships, it was possible that some individuals may have experienced possible feelings of dissatisfaction or loss as they reflected on past or current intimate relationships and past relationships with parents. The names of several therapists and agencies that provide counselling on relationship issues were provided on the last page of the questionnaire (see p. 121 in Appendix C). Therefore, if any respondents experienced distress as a result of completing the questionnaire, they were aware of professional resources they could access.

LIMITATIONS OF THE STUDY

There are several limitations to this study. First, a limitation of the study is that it uses self-report measures. In self-report measures, respondents may unwittingly or deliberately suppress or falsify reports of relationships (Bowlby, 1979). Factors such as "internal coherence, defensiveness, and idealization" may not be evident in a self-report measure, thus leading to "systematic distortions in self-report attachment ratings" (Bartholomew, 1993, p. 39). Furthermore, it is acknowledged that in some cases the wording of prototype descriptions may influence results (Noller & Feeney, 1994).

Second, because the study is retrospective in nature (i.e., asking about romantic relationships from several years ago), some memory reconstruction may occur. To minimize this effect, individuals are asked about specific relationships rather than general experiences.

Third, because the measures are collected at the same time it is difficult to determine the exact nature of causality. For example, it is not possible to determine whether adolescent attachment styles cause differing levels of emotional distress, or if emotional distress influences respondents to report specific adolescent attachment styles. Fourth, as this study was done with a sample of young adults, the results can not be generalized to other populations.

Finally, the measures, for the most part, are discrete and categorical. Information can be lost because individual variance and uniqueness is collapsed into a category. However, researchers in the area of adult attachment generally feel that categorical measures are still helpful, as they are trying to capture the construct of internal working models based on views of the self and others (Bartholomew & Horowitz, 1991; Collins & Read, 1990; Hazan & Shaver, 1987). The regression analyses make use of a more "prototypical" approach to adult attachment rather than a "categorical" approach (Griffen & Bartholomew, 1994). A prototypical approach allows researchers to investigate how individuals fit each of the four categories, instead of placing individuals into one category without acknowledging that individuals may correspond in varying degrees to more than one category.

CHAPTER 4

RESULTS

This chapter consists of several sections. First, the sample is portrayed through the use of descriptive statistics. Second, in order to compare findings regarding the attachment styles with previous research, the main variables are discussed and results from the measures are described. Third, results from the regression analyses are presented. These regression analyses address the issues of attachment style stability and change. Throughout the results section, relationships between the results and the hypotheses are highlighted.

DATA CLEANING

Before analysis, the data were examined for univariate outliers and then checked against the original data for accuracy of data input. Any incorrectly entered data were then corrected. The SPSS for Windows program was used for data analysis.

DESCRIPTION OF THE SAMPLE

The sample was examined using descriptive statistics: frequencies, mean, median, range, and variance. Three hundred and eighty seven questionnaires were returned, however one was discarded because a large proportion of the questionnaire had not been completed. The final sample size consisted of 386 respondents, with ages ranging from 17 to 26 ($\underline{M} = 21.2$). Fifty-two percent ($\underline{n} = 202$) of the sample were female and 48% ($\underline{n} = 184$) were male.

Individuals were asked to identify their relationship status. Three individuals did not report their relationship status. Of the remaining 383 respondents, 7% ($\underline{n} = 26$) were married, 53% ($\underline{n} = 205$) were seeing one person exclusively, 8% ($\underline{n} = 29$) were seeing more than one person, 23% ($\underline{n} = 88$) were not seeing anyone but looking, and 9% ($\underline{n} = 35$) were not seeing anyone and not looking. For those who were currently in a relationship ($\underline{n} = 241$), the duration ranged from 1 week to 8 years and 1 month ($\underline{\text{Mdn}}$[6] =

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[6] The median is presented instead of the mean in cases where the distribution of the variable was significantly skewed.

1 year and 10 months). Less than 1% (n = 3) reported that they were divorced. The sample was primarily heterosexual, as less than 2% (n = 5) indicated that they were homosexual or bisexual (and 2 individuals did not report their sexual orientation).

Individuals were asked several relationship history questions. The age of individuals when they had their first romantic relationship in adolescence (n = 308) ranged from 10 years and 3 months to 18 years and 10 months (M = 15 years and 4 months, SD = 1 year and 6 months). The duration of their longest adolescent romantic relationship (n = 310) ranged from 2 weeks to 9 years and 6 months (Mdn = 14 months).

Individuals (n = 381) reported having had between 0-10 serious love relationships (Mdn = 2). They reported having been in love with someone else without the feelings being reciprocated between 0-8 times (n = 375, M = 1, SD = 1.34) and having had their heart "broken" between 0-30 times (n = 380, Mdn = 1.63).[7] They reported someone being in love with them with them not feeling the same way between 0-20 times (n = 385, Mdn = 2.00) and "breaking someone's heart" between 0-24 times (n = 385, Mdn = 2.00). Finally, when asked to what extent respondents felt that their current ideas about love had been influenced by their past romantic relationship experiences, answers ranged from 0 (not at all) to 4 (extremely), with an average of 2.79.

ADOLESCENT AND ADULT ATTACHMENT STYLES

To ascertain individuals' current adult attachment styles and attachment styles in their most significant adolescent romantic relationships, individuals were asked to choose one of Bartholomew's four categorical descriptions that best characterized or described their way of relating in these relationships. Descriptive statistics were then used to determine the percentages of individuals reporting each attachment style.

Twenty four percent (n = 93) did not complete the part on adolescent attachment styles. Eighteen percent (n = 70) of the sample did not complete it because they did not have an adolescent romantic relationship and therefore could not answer this part. An additional 6% ($\underline{n}$ = 23) did not complete this part, even though they had identified in another part of the questionnaire that they did have an adolescent romantic relationship. Of the remaining 293 respondents, 14% ($\underline{n}$ = 41) reported a dismissing style, 26% ($\underline{n}$ = 76) reported a preoccupied style, 23% ($\underline{n}$ = 68) reported a fearful style, and 37% ($\underline{n}$ = 108) reported a secure style. A 4 × 2 chi-square test revealed that there were no significant sex differences in the percentage of males and females reporting each style, χ^2 (3, $\underline{n}$ = 293) = 4.04, ns.

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[7] This was the only relationship history variable in which males and females differed significantly from each other. Females reported having their hearts broken more often (M = 1.85) than males (M = 1.38) ($t(378) = 2.15$, $p < .05$).

Two percent ($\underline{n}$ = 9) of the sample did not complete the section of the questionnaire on adult attachment styles. Of the remaining 377 respondents, 14% ($\underline{n}$ = 55) reported a dismissing style, 16% ($\underline{n}$ = 60) reported a preoccupied style, 27% ($\underline{n}$ = 101) reported a fearful style, and 43% ($\underline{n}$ = 161) reported a secure style. A 4 × 2 chi-square test revealed that there was a trend toward sex differences in the attachment styles reported by females and males although it did not reach conventional levels of statistical significance, χ^2 (3, $\underline{n}$ = 377) = 6.42, $\underline{p} < .10$. Contrary to expectations, there was a tendency for more males (20%) than females (13%) to report a preoccupied style, and more females (31%) than males (22%) to report a fearful attachment style. However a previous study also found similar findings. A study of adult children of alcoholics (Brennan et al., 1991) found that more males than females reported both the dismissing and preoccupied style, and more females than males reported having a fearful style. It is interesting to note that they thought the finding of preoccupied males was an unusual finding and anticipated that it would not be replicated because it was contrary to previous research. Table 1 presents the percentage of respondents in this study reporting each attachment style in adolescence and currently in adulthood compared to the percentages in Bartholomew and Horowitz's 1991 study of adult attachment styles.

Table 1

Comparison of Percentages Between Adolescent, Adult, and Bartholomew & Horowitz's Adult Attachment Styles

Attachment Style	Adolescent ($n = 293$)	Adult (Current) ($n = 377$)	Bartholomew & Horowitz (1991) ($N = 77$)
dismissing	14%	14%	18%
preoccupied	26%	16%	14%
fearful	23%	27%	21%
secure	37%	43%	47%

In examining the above Table, two findings were apparent. Differences between adult attachment style percentages in this study and Bartholomew and Horowitz's percentages in their study were not significantly different from each other, $\chi^2(3, n = 377) = 2.91$, ns. Second, the differences between percentages of adolescent and current adult attachment styles approached but did not reach conventional levels of statistical significance, $\chi^2(3, n = 293) = 7.68$, $p < .10$.

To test if individuals who reported a certain attachment style in adulthood also reported having had the same attachment style in adolescence, a 4 × 4 chi-square test was performed. Forty-three percent of the sample had the same attachment style in their most significant adolescent romantic relationship and currently as an adult, $\chi^2(9, n = 289) = 50.37$, $p < .001$. An additional 2 × 2 chi-square test, using two categories of attachment as either secure or insecure, revealed that 62% of individuals reported either a secure or an insecure attachment style in both adolescence and adulthood, $\chi^2(1, n = 289) = 12.30$, $p < .001$.

A one-way ANOVA was performed to investigate the possibility that individuals with different current attachment styles might differ in the extent to which they felt their current ideas about love had been influenced by past romantic relationship experiences. The test was significant, F(3, 369) = 2.58, p = .05, and a Student-Newman-Keuls post-hoc test revealed that individuals with current fearful styles reported that their current ideas about love had been influenced more (M = 3.00) than individuals with current secure attachment styles (M = 2.70).

In addition to asking respondents to identify which of the four (adolescent and adult) descriptions best described them, respondents were also asked to rate on a 7-point Likert-type scale the extent to which each of the four styles described their way of relating in relationships. The means and standard deviations of the four style scales are presented in Table 2.

Table 2

Means and Standard Deviations of Adolescent and Adult Attachment Style Scales

	Adolescent		Adult	
Attachment Style Scale	M	SD	M	SD
dismissing	3.30	1.85	3.64	1.77
preoccupied	3.67	1.99	3.18	1.88
fearful	3.60	1.96	3.65	2.02
secure	4.18	2.00	4.29	1.93

T-tests for paired samples revealed that adolescent and adult ratings were significantly different from each other on two attachment styles. First, although there was no overall change in the percentage of dismissing styles from adolescence to adulthood, the adult dismissing scale mean was significantly higher than the adolescent dismissing scale mean, t(295) = 2.77, p<.01.[8] Therefore individuals were rating their style as more dismissing even though they were not endorsing the dismissing category more in adulthood. Second, the adult preoccupied scale mean was significantly lower than the adolescent preoccupied scale mean, $\underline{t}(295) = 3.40$, $\underline{p} < .005$, corresponding to the percentage decrease in preoccupied styles. T-tests results for the secure and fearful scales were non-significant ($\underline{t}$'s < 1). Nevertheless, correlations between adolescent attachment scale scores and the current attachment scale scores were all significant at $\underline{p} < .001$. The correlations were .46 for dismissing, .32 for fearful, .39 for preoccupied, and .22 for secure.

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[8] Degrees of freedom are lower than the number of adult attachment styles identified because of lost data due to only three quarters of the sample reporting an adolescent romantic relationship.

T-tests for independent samples were conducted to test for sex differences in any of these ratings.[9] Females scored significantly higher on the adolescent fearful style ($\underline{M} = 3.84$) than males ($\underline{M} = 3.31$), $\underline{t}(292) = 2.35$, $\underline{p} < .05$.[10] There were no sex differences in the other adolescent attachment scales (dismissing and preoccupied: $\underline{t}$'s < 1, secure: $\underline{t}(293) = 1.06$, ns). Females also scored significantly higher on the adult fearful style ($\underline{M} = 3.92$) than males ($\underline{M} = 3.34$), $\underline{t}(378) = 2.80$, $\underline{p} < .01$, and males scored significantly higher on the adult preoccupied style ($\underline{M} = 3.41$) than females ($\underline{M} = 2.97$), $\underline{t}(377) = 2.32$, $\underline{p} < .05$. There were no sex differences on the other two adult attachment scales (dismissing: $\underline{t}(378) = 1.53$, ns; secure: $\underline{t}(379) = 1.49$, ns). These findings were different from Bartholomew and Horowitz' findings (1991) and Scharfe's findings (1992) (based on interview ratings) of females scoring higher on preoccupied and males scoring higher on dismissing. However, Duggan and Brennan (1994) found that males scored higher on the preoccupied and dismissing scales, while females scored higher on the fearful scale.

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[9] Rather than use 2 × 2 (sex by time of life) repeated measures ANOVA's to investigate differences between females and males between adolescent attachment ratings and adult attachment ratings, t-tests were conducted separately for adolescent ratings and current adult ratings. This was to allow the full sample to be included in the analysis for adult ratings. To conduct ANOVA's would have resulted in eliminating about one-quarter of the sample.

[10] Due to a few cases where individuals answered some rating scales although they had not identified one style in the forced choice part of the measure (or visa versa), the degrees of freedom are slightly different for some t-tests. This occasionally occurred with the adult, adolescent, mother, and father attachment styles.

EMOTIONAL DISTRESS

To assess emotional distress following the termination of individuals' most significant adolescent romantic relationships, scores on Simpson's Emotional Distress Index were calculated. Of 293 individuals who reported having had a significant adolescent relationship, 94% (n = 276) also indicated that this relationship had ended. Following Simpson's procedure for calculating emotional distress, scores on the first 6 questions were added. In this study, respondents' scores ranged from 6 to 45, with a mean of 26.55 (SD = 10.73).

To test the hypothesis that individuals would differ in the amount of emotional distress reported depending on their attachment style, and also to test if they differed based on their sex, a two-way ANOVA was performed with emotional distress as the dependent variable and attachment style and sex as covariates. There was no main effect for sex, $F < 1$, indicating that, overall, females and males reported similar amounts of emotional distress upon relationship dissolution. As expected, a main effect was found for attachment styles. Adolescent attachment styles differed significantly in the amount of emotional distress experienced after loss of their most important adolescent romantic relationship, $F(3, 269) = 12.58$, $p < .001$. A Student-Newman-Keuls post-hoc test revealed that the adolescent dismissing style scored significantly lower on emotional distress than the other three styles, and the adolescent preoccupied style scored higher than the other three styles[11] (see Table 3 for marginal means).

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[11] The same analysis was performed for current adult styles. Although the test did not reach conventional levels of statistical significance, $F(3, 271) = 2.71$, $p < .10$, the same pattern of means emerged. Individuals with current fearful or preoccupied styles reported having had higher levels of emotional distress after the ending of their adolescent relationship than individuals with current dismissing styles.

Table 3

Emotional Distress Means for Adolescent Attachment Styles

	Adolescent Attachment Style			
Emotional Distress	secure	dismissing	preoccupied	fearful
Females	27.14	20.17	30.05	26.19
Males	25.52	18.15	33.06	24.50
Total Sample	26.31^b	19.11^a	31.43^c	25.56^b

Note. Total Sample Means with different subscripts differ significantly according to Student-Newman-Keuls test ($p < .05$).

For individuals whose adolescent relationships had ended ($n = 276$), 38% ($n = 106$) reported that their partner had ended it, 36% ($n = 98$) reported that they had ended it, and 26% ($n = 72$) reported that the termination had been a mutual decision. A 3 × 4 chi-square test was performed to examine if individuals with different attachment styles differed in their perception of who ended the relationship. Results revealed that dismissing individuals were more likely to report that they had ended the relationship (61%) rather than their partner (21%) or through a mutual decision (18%), and preoccupied individuals were more likely to report that their partner had ended the relationship (58%) than themselves (21%) or a mutual decision (21%), $\chi^2(6, n = 276) = 26.66$, $p < .001$. To test if distress differed depending on the perception of who ended the relationship, a one-way ANOVA was performed. There were differences among the groups, $F(2, 274) = 30.35$, $p < .001$, and a Student-Newman-Keuls post-hoc test revealed that all groups differed significantly from each other (see Table 4). Not surprisingly, individuals whose partners had ended the relationship experienced the highest amount of emotional distress and individuals who ended the relationship experienced the least amount of emotional distress when compared to the other two groups.

Table 4

Emotional Distress Means by Who Ended the Relationship

Who Ended the Relationship	M
your partner	31.96^a
you	21.35^b
both you and your partner	25.75^c

Note. Means with different subscripts differ significantly according to Student-Newman-Keuls test ($p < .05$).

In addition, the amount of emotional distress experienced by individuals was positively related to the length of their adolescent relationship ($r = .24$, $p < .001$). That is, the longer the adolescent relationship, the more emotional distress individuals reported. Finally, the more emotional distress individuals reported after their adolescent relationship, the more individuals reported their current ideas about love had been influenced by past romantic relationship experiences ($r = .18$, $p < .005$).

MEASURES OF PARENT-CHILD ATTACHMENT

Mother-Child and Father-Child Attachment Styles

To assess individuals' recollections of parent-child attachment or the nature of their mothers' and fathers' caregiving styles, respondents were asked to choose one of four categories that best described their mother or father.

Less than 3% ($n = 9$) did not complete the section on mother attachment. Two respondents did not have a mother figure in childhood therefore they did not complete this section and an additional 7 respondents left the section blank. Of the remaining 377 respondents, 3% ($n = 12$) reported a dismissing mother, 22% ($n = 81$) reported a preoccupied mother, 3% ($n = 11$) reported a fearful mother, and 72% ($n = 273$) reported a secure mother. There were no significant differences in the percentages of males and females who reported mothers in the different categories, $\chi^2(3, n = 377) = 3.27$, ns.

Six percent ($n = 23$) did not complete the section on father attachment. Fourteen respondents did not complete this section because they did not have a father figure and another 9 individuals did not complete this section. Of the remaining 363 respondents, 12% ($\underline{n} = 43$) reported a dismissing father, 27% ($\underline{n} = 99$) reported a preoccupied father, 6% ($\underline{n} = 22$) reported a fearful father, and 55% ($\underline{n} = 199$) reported a secure father. There were no significant differences in the percentage of males and females who reported fathers in the different categories, $\chi^2(3, \underline{n} = 363) = 4.65$, ns.

A comparison of the percentages of styles reported for mothers and fathers is presented in Table 5. Overall, the percentages of fearful and dismissing mothers were slightly lower than expected.

Table 5

Comparison of the Percentages of Mother and Father Attachment Styles

Caregiving Style	Mother	Father
dismissing	3%	12%
preoccupied	22%	27%
fearful	3%	6%
secure	72%	55%

In addition to asking respondents to check which of the descriptions best described their mother or father, respondents were also asked to rate on a 7-point Likert-type scale the extent to which each of the four styles described their mother's or father's style of caregiving during their childhood. Means and standard deviations of the four styles are presented in Table 6.

Table 6

Means and Standard Deviations on Mother and Father Attachment Style Scales

	Mother		Father	
Attachment Style Scale	M	SD	M	SD
dismissing	2.14	1.47	2.70	1.80
preoccupied	3.09	1.95	3.56	1.96
fearful	1.53	1.21	2.11	1.70
secure	5.65	1.68	4.79	2.05

T-tests for paired samples were conducted to see if scale means for mothers and fathers were significantly different from each other. Fathers were rated higher than mothers on the dismissing scale, $t(362) = 5.98$, $p <.001$, fearful scale, $t(365) = 6.46$, $p <.001$, and preoccupied scale, $t(365) = 4.08$, $p <.001$. Mothers were rated higher on the secure scale than fathers, $t(362) = 7.10$, $p <.001$.

To test if males and females rated their fathers and mothers differently on the Likert-type scales, t-tests for independent samples were also performed. Females rated their mothers higher on the fearful scale ($M = 1.68$) than males ($M = 1.36$), $t(377) = 2.58$, $p <.05$. Results for the other three mother scales were non-significant (preoccupied: $t < 1$; dismissing: $t(375) = 1.51$, ns; secure: $t(375) = 1.40$, ns). On the other hand, males rated their fathers significantly higher on the dismissing scale ($M = 2.93$) than females ($M = 2.49$), $t(367) = 2.38$, $p <.05$. Results for the other three father scales were not statistically significant (preoccupied: $t(367) = 1.59$, ns; fearful and secure: t's < 1).

Parental Bonding Instrument

The parental bonding instrument (Parker et al., 1979) was an additional measure included to assess the nature of individuals' attachment experiences with their parental figures during childhood. For fathers, care ($n = 364$) ranged from 0 to 36 ($M = 22.4$, SD = 8.84) and overprotection (n = 362) scores ranged from 0 to 37 (M = 11.93, SD = 7.90). For mothers, care (n = 381) ranged from 0 to 36 (M = 27.56, SD = 7.23) and overprotection (n = 376) ranged from 0 to 38 (M = 14.07, SD = 7.91). To see if respondents rated mothers and fathers differently on the two dimensions, t-tests for paired samples were conducted. Not surprisingly, mothers were reported as being significantly more caring than fathers, t(360) = 10.05, $p < .001$, and more overprotective than fathers, t(355) = 5.11, $p < .001$ (see Table 7). Mothers are typically rated higher than fathers on both the overprotection and care dimensions (Parker, 1989; Parker et al., 1979).

Table 7

Means[a] of Care and Overprotection for Mothers and Fathers

	Care	Overprotection
Mothers	27.68	14.13
Fathers	22.43	11.93

[a] means for the t-test are different than the original means due to pairing up of cases.

Comparison of the Parental Measures

Since the measure to assess parent-child attachment styles in a manner consistent with Bartholomew's self-report measure of adult attachment styles was developed specifically for this research, it did not have established validity or reliability. Thus, participants' responses to the newly created parent-child attachment measure were compared to Parker's Parental Bonding Instrument, which had established validity and reliability (as described in the methodology section). Means of the care and overprotection dimensions were examined for each mother and father attachment style using one-way ANOVA tests. For each test that had a significant result, a Student-Newman-Keuls post-hoc test was performed to see which groups differed significantly from each other.

Mother attachment styles differed significantly on the dimension of care,

$F(3, 373) = 116.40$, $p < .001$. As expected, the fearful mother style was significantly lower than the other three attachment styles, and the secure mother style was significantly higher on the care dimension than the other three styles. Mother attachment styles also differed on the dimension of overprotection, $F(3, 368) = 19.89$, $p < .001$. Not surprisingly, the secure style was significantly lower on overprotection than the dismissing and preoccupied styles (see Table 8).

Father attachment styles also differed significantly on care, $F(3, 354) = 182.41$, $p < .001$, and overprotection, $F(3, 352) = 24.19$, $p < .001$. All groups differed significantly from each other on the care dimension, and secure fathers had significantly lower levels of overprotection than the other styles (see Table 9).

Table 8

Care and Overprotection Means for Mother Attachment Styles

	Mother Attachment Style (M)			
PBI Dimensions	secure	dismissing	preoccupied	fearful
Mother Care	30.57^{c}	20.73^{b}	20.25^{b}	13.18^{a}
Mother Overprotection	12.36^{a}	18.55^{b}	19.31^{b}	16.55^{ab}

Note. Within rows, means with different subscripts differ significantly according to Student-Newman Keuls test ($p < .05$).

Table 9

Care and Overprotection Means for Father Attachment Styles

	Father Attachment Style (M)			
PBI Dimensions	secure	dismissing	preoccupied	fearful
Father Care	28.20^{d}	12.26^{b}	18.52^{c}	8.05^{a}
Father Overprotection	9.06^{a}	14.95^{b}	15.57^{b}	17.00^{b}

Note. Within rows, means with different subscripts differ significantly according to Student-Newman-Keuls test ($p < .05$).

Differences between the four categories between care and overprotection (for both mothers and fathers) seemed logical. For example, it would be expected that a secure parent would score lower in overprotection or that a fearful parent would score lower in care. The analysis not only provided some support for convergent validity between the two measures but also provided a degree of confidence in the validity of the mother-child and father-child attachment descriptions.

REGRESSION ANALYSIS

To test the major hypotheses that parent-child attachment would predict both adolescent attachment and adult attachment, and that adolescent attachment and relationship history would predict adult attachment, regression analyses were conducted. More specifically, to determine which variables contributed to prediction of ratings on each Likert-type attachment scale (i.e., adolescent or adult dismissing, preoccupied, fearful, and secure attachment scales), regression analyses were performed using multiple linear regression with SPSS for Windows.

To test the mediating effect of adolescent romantic relationships and relationship history experiences, a variation of Baron & Kenny's (1986) multiple regression mediation approach was performed.

> This model assumes a three-variable system such that there are two causal paths feeding into the outcome variable; the direct impact of the independent variable [parent-child attachment to adult attachment] and the impact of the mediator [adolescent attachment and relationship experiences to adult attachment]. There is also a path from the independent variable to the mediator [parent-child attachment to adolescent attachment] (Baron & Kenny, 1986, p. 1176).

To predict the effect of mediation, a series of regression analyses are performed (Baron & Kenny, 1986). Therefore, to test smaller portions of the proposed causal model, two separate regression analyses were performed.[12] Each of the two analyses was performed eight times: once for each of the four attachment scales and separately for each sex. The regression analyses were:

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[12] A third regression analysis was also performed, testing the pathway of the mediator variables on the outcome variable. The results of these regressions were very similar to

1. Model 1: mother-child attachment styles and father-child attachment styles (predictor variables) on adolescent attachment style (dependent variable).
2. Model 2: mother-child attachment styles, father-child attachment styles, adolescent attachment styles, and relationship history experiences (predictor variables) on adult attachment style (dependent variable).

One of the assumptions of regression analysis is the assumption of normality. As a result, skewed data can influence regression results. When analyzing the distribution of predictor variables, some extreme outliers were found, thus skewing the distribution. As a result, outliers with a z-score greater than 3 were recoded. The strategy used to reduce their influence on the variable's distribution was to assign outliers a raw score one away from the nearest non-outlier, while maintaining their rank order (Tabachnick & Fidell, 1989).

For each analysis, scale scores on the appropriate attachment scales[13] (mother-child, father-child, or adolescent) were entered as blocks and scores on relationship

---

the second set of regression analyses presented here, therefore they are not included, except in the case of referring to prediction of females' current fearful scale scores.

[13] There are several reasons for using scale scores in the regression analysis. First, the use of forced choice, categorical measures suggests that one attachment style may more fully characterize an individual's experiences more than the other styles. While this may be true, previous research (for example, Bartholomew, 1990; Collins & Read, 1990) also notes that individuals are likely to have different characteristics of each of the attachment styles in their relationships. The use of scale scores, in which individuals are able to rate the extent to which each attachment style describes them, allows for this complexity. Therefore, scores on all scales (i.e., the four mother-child, father-child, or adolescent attachment scales scores) were entered as blocks in order to more thoroughly capture the full nature of attachment at each level. Furthermore, scales were entered as blocks because previous correlations had showed that the scales were related to each

history variables as a block.[14] The variables were entered in the following order: (1) scores on mother-child attachment scales, (2) scores on father-child attachment scales, (3) scores on adolescent attachment scales, and (4) emotional distress (following the ending of the individual's most significant adolescent romantic relationship) and relationship history experiences[15] (number of times respondent's heart was broken, duration of respondent's longest adolescent romantic relationship, number of individuals that loved respondent, number of romantic relationships, number of times respondent broke other people's hearts, and number of people respondent loved). This order was used as the blocks represented the natural chronological order of events in an individual's life in addition to their theoretical importance. Moreover, mother-child attachment was entered before father-child attachment because it has been shown that mothers have more of an influence on children's development than fathers (Shaver & Hazan, 1993). An alpha level of .05 was used for all statistical tests.

Predicting Adolescent Attachment Scale Scores From Parent Attachment

It was hypothesized that parent-child attachment would predict attachment styles identified for the most significant adolescent romantic relationships. To test this hypothesis, four hierarchical regression analyses were conducted, capturing part of the causal model as depicted in Figure 2. The four mother-child attachment scale scores were entered as the first block of predictor variables and the four father-child attachment scale scores were entered as the second block of predictor variables. Ratings on each of

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other. This reduced the effect of multi-collinearity which can occur in regression analysis (Bradford & Lyddon, 1993). The third reason for using scale scores was that there were no non-parametric statistics that would allow the same testing of the model.

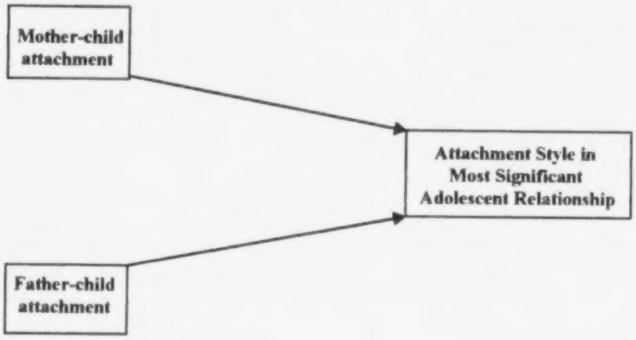
[14] The regression analyses were conducted a second time using the Parental Bonding Instrument instead of the parent-child attachment descriptions. See Appendix E for the results from these regressions.

[15] The age of individuals when they first had a romantic relationship was initially entered as one of the relationship history variables, however it was discarded due to its strong effect on the conditional index for multi-collinearity testing.

the adolescent attachment style scales were the dependent variables. The analysis was performed once for females and once for males, resulting in eight regression analyses total.

Figure 2

Model 1: Predicting Adolescent Attachment Scale Scores From Parent-Child Attachment


Mother-child attachment
Attachment Style in Most Significant Adolescent Relationship
Father-child attachment

Predicting Adolescent Dismissing Attachment Scale Scores

Parent-child attachment ratings did not reliably predict adolescent dismissing scale scores for females, $F < 1$. On the other hand, predictor variables for males accounted for 13% of the total variance in adolescent dismissing scale scores, $F(8, 119) = 2.17$, $p < .05$. Mother-child attachment scale scores entered at Step 1 accounted for 8% of the total variance, and father-child attachment scale scores entered at Step 2 accounted for an additional 5% of the variance. The individual predictors approached but did not reach statistical significance (see Table 10).[16]

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[16] Two father variables were noteworthy at $p < .10$ for males. No mother styles appeared significant (even though mother-child attachment accounted for more variance than father-child attachment) because betas in the table are from the final model. In Step 1, however, significant betas were evident for fearful mother ($\beta = .18$, $p < .05$) and preoccupied mother ($\beta = .19$, $p < .05$).

Table 10

Standardized Regression Coefficients (Betas) for Predictors of Adolescent Dismissing Attachment Scale Scores

Predictor Variables	Females (n = 152)	Males (n = 128)
Step 1		
dismissing mother	.08	-.02
fearful mother	.13	.13
preoccupied mother	-.10	.17
secure mother	.14	-.05
Step 2		
dismissing father	.03	.22†
fearful father	-.02	.08
preoccupied father	.09	-.08
secure father	.07	.24††

Note. Reported betas are from the final regression model.
$^{\dagger\dagger}p = .10$. $^{\dagger}p < .10$.

Predicting Adolescent Fearful Attachment Scale Scores

For females, predictor variables accounted for 18% of the total variance, $F(8, 142) = 4.00$, $p < .001$. Mother-child attachment scale scores entered at Step 1 accounted for a greater percentage of variance (17%), and father-child attachment scale scores entered at Step 2 accounted for only an additional 1%. Again, individual predictors were those involving attachment with mothers (see Table 11). The dismissing and preoccupied mother styles, but not the fearful mother style, were positively related to the adolescent attachment style. Contrary to expectations, a secure mother style was positively related to a fearful adolescent style. The regression equation was not statistically reliable for males, $F(8, 118) = 1.13$, ns.

Table 11

Standardized Regression Coefficients (Betas) for Predictors of Adolescent Fearful Attachment Scale Scores

Predictor Variables	Females (n = 151)	Males (n = 127)
Step 1		
dismissing mother	.27**	.00
fearful mother	.03	-.17
preoccupied mother	.46****	.18
secure mother	.43***	-.03
Step 2		
dismissing father	-.05	.14
fearful father	-.04	-.02
preoccupied father	.10	.11
secure father	.04	.20

Note. Reported betas are from the final regression model.
$^{**}p < .01$. $^{***}p < .005$. $^{****}p < .001$.

Predicting Adolescent Preoccupied Attachment Scale Scores

Regression results were non-significant for both females, $F < 1$, and males, $F(8, 119) = 1.28$, ns. Parent-child attachment scale scores did not reliably predict scores on the adolescent preoccupied attachment scale.

Predicting Adolescent Secure Attachment Scale Scores

Regression results were non-significant for females, $F(8, 143) = 1.62$, ns, and males, $F(8, 118) = 1.45$, ns. Parent-child attachment scale scores did not reliably predict scores on the adolescent secure attachment scale.

Summary of Results From First Regression Analysis

This set of regression analyses tested the hypotheses that parent-child (mother and father) attachment would predict adolescent attachment styles (main hypothesis), and that opposite-sex parents would account for more of the variance in predicting the respondents' adolescent attachment styles than same-sex parents (sub hypothesis).

Limited support was found for the main hypothesis. Parent-child attachment only predicted scores on females' fearful adolescent attachment scales and on males' dismissing adolescent attachment scales. And contrary to expectations, mother-child attachment accounted for a greater percent of the variance in both cases. In summary, parent-child attachment scale scores did not reliably predict most adolescent attachment dimensions. In those cases where parent-child attachment did reliably predict adolescents' insecure styles (dismissing scores for males and fearful scores for females), it was mother-child attachment that contributed more to the final variance than father-child attachment. Figure 3 contains models (for each attachment style) of the relationships found for females and males, respectively.[17] For significant findings, the percentage of variance each block accounted for is entered in the model. For non-significant findings, no percentage is entered in the model.

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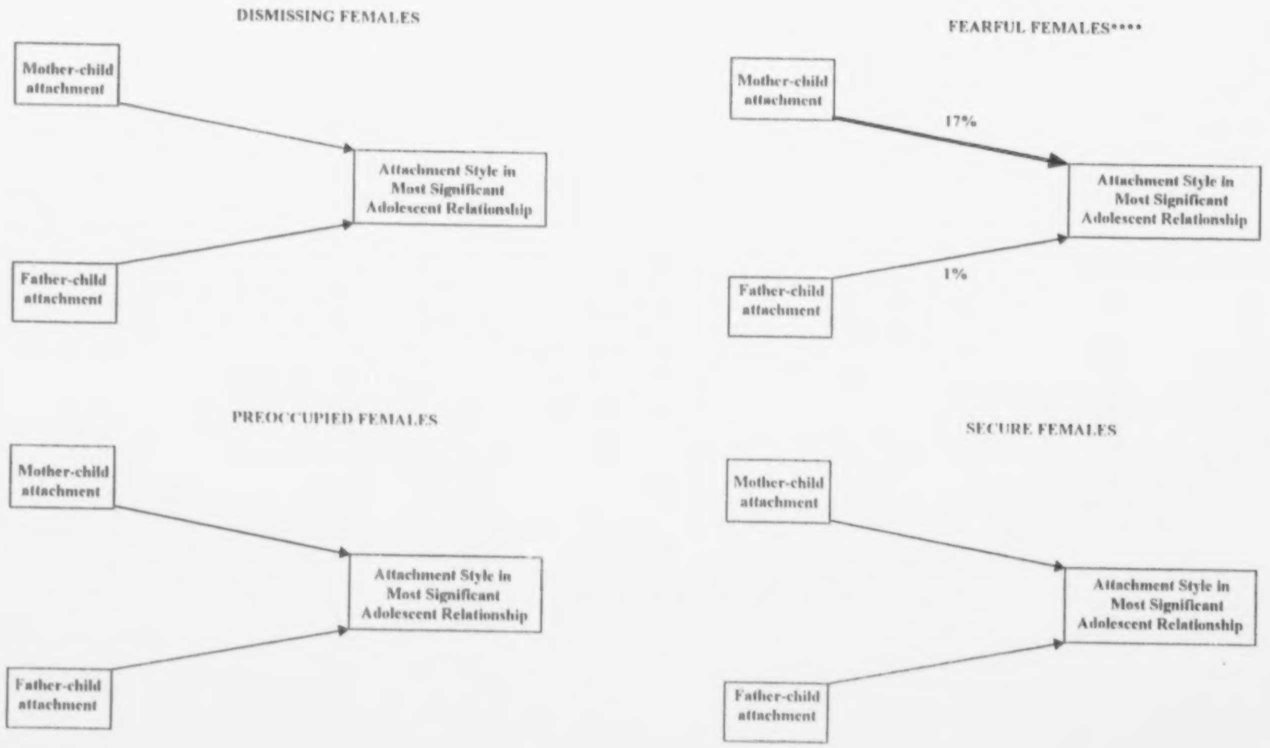
[17] See Appendix D for models containing the betas of significant individual predictor variables.

Figure 3: Predicting Adolescent Attachment Scale Scores

a) Predicting Females' Adolescent Attachment Scale Scores From Parent-Child Attachment



DISMISSING FEMALES

FEARFUL FEMALES****

PREOCCUPIED FEMALES

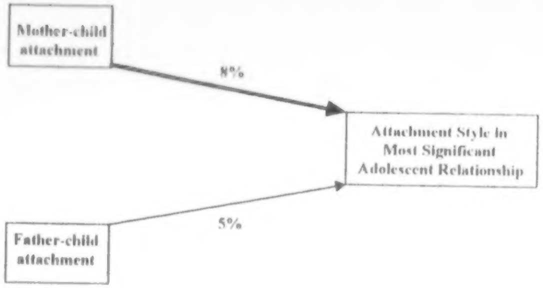
SECURE FEMALES

Mother-child attachment
Attachment Style in Most Significant Adolescent Relationship
Father-child attachment
Mother-child attachment
17%
Attachment Style in Most Significant Adolescent Relationship
1%
Father-child attachment
Mother-child attachment
Attachment Style in Most Significant Adolescent Relationship
Father-child attachment
Mother-child attachment
Attachment Style in Most Significant Adolescent Relationship
Father-child attachment

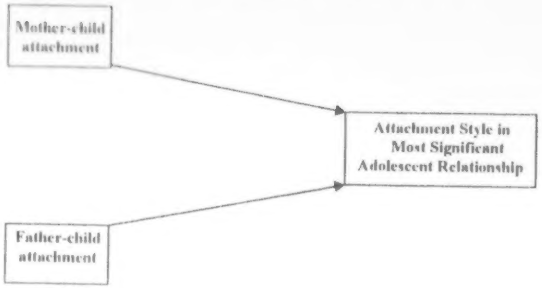
****$p < .001$

b) Predicting Males' Adolescent Attachment Scale Scores From Parent-Child Attachment

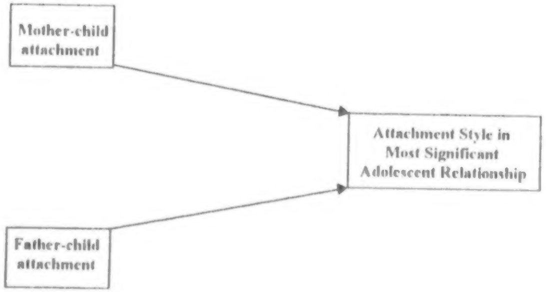
DISMISSING MALES*


Mother-child attachment
8%
Attachment Style in Most Significant Adolescent Relationship
Father-child attachment
5%

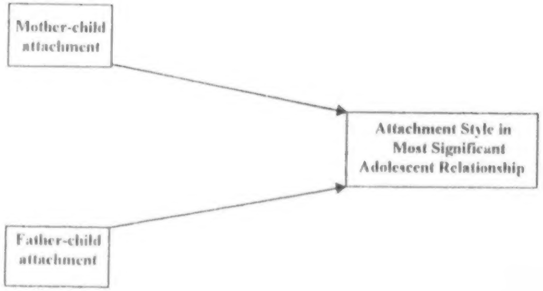
FEARFUL MALES


Mother-child attachment
Attachment Style in Most Significant Adolescent Relationship
Father-child attachment

PREOCCUPIED MALES


Mother-child attachment
Attachment Style in Most Significant Adolescent Relationship
Father-child attachment

SECURE MALES


Mother-child attachment
Attachment Style in Most Significant Adolescent Relationship
Father-child attachment

*$p < .05$

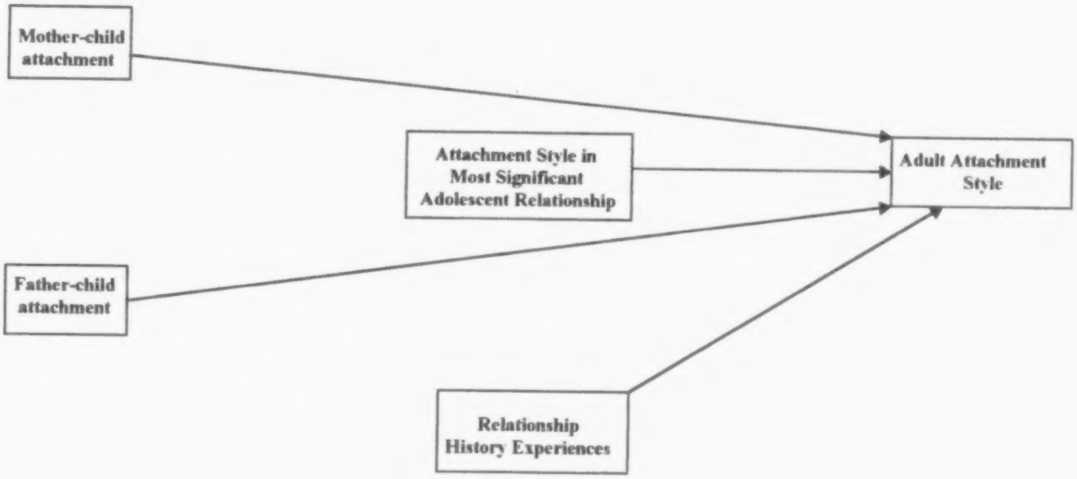
Predicting Adult Attachment Scale Scores From Parent-Child Attachment, Adolescent Attachment, and Romantic Relationship Experiences

It was hypothesized that parent-child attachment, adolescent attachment, and related romantic experiences would predict current adult attachment. To test this hypothesis, a second set of four regression analyses was conducted, capturing a larger portion of the proposed causal model as depicted in Figure 4. This set of analyses explored the ability of parent-child attachment, adolescent attachment, and relationship history variables to predict current adult attachment styles.

Four hierarchical regression analyses were conducted, with ratings on each of the current attachment style scales as the dependent variables. Mother-child attachment scale scores were entered as predictors in the first block; father-child attachment scale scores were entered in the second block; adolescent attachment scale scores were entered in the third block; relationship history variables were entered in the fourth and final block. Analyses were conducted separately for females and males, resulting in eight regression analyses total.

Figure 4

Model 2: Predicting Adult Attachment Scale Scores From Parent-Child Attachment, Adolescent Attachment, and Romantic Relationship Experiences


Mother-child attachment
Attachment Style in Most Significant Adolescent Relationship
Adult Attachment Style
Father-child attachment
Relationship History Experiences

Predicting Adult Dismissing Attachment Scale Scores

When analyzed for females, 23% of the total variance of adult dismissing attachment scale scores was accounted for by the predictor variables, F(19, 112) = 1.77, $p < .05$. Mother-child attachment entered at Step 1 accounted for 2% of variance; father-child attachment entered at Step 2 did not add to prediction; adolescent attachment entered at Step 3 accounted for 17%; and relationship history variables entered at Step 4 accounted for a further 4%. Adolescent dismissing and adolescent preoccupied were the significant individual predictor variables for females' adult dismissing scales (see Table 12). Females who scored higher on the adolescent dismissing scale were also likely to rate themselves higher on the current dismissing scale whereas those females who scored higher on the adolescent preoccupied scale were less likely to score higher on the current dismissing scale.

Results were also significant for males, with predictor variables accounting for 40% of the variance, F(19, 95) = 4.01, $p < .001$. Mother-child attachment scale scores entered at Step 1 accounted for 2% of variance; father-child attachment scale scores entered at Step 2 accounted for a further 5%; adolescent attachment scale scores entered at Step 3 accounted for 33%; and relationship history variables entered at Step 4 accounted for a final 5% of the variance. The adolescent dismissing style was the only significant individual predictor variable for males' adult dismissing scale scores (see Table 12). Males who rated themselves highly on the adolescent dismissing scale were also likely to rate themselves highly on the current dismissing scale.

Table 12

Standardized Regression Coefficients (Betas) for Predictors of Adult Dismissing Attachment Scale Scores

Predictor Variables	Females (n = 132)	Males (n = 115)
Step 1		
dismissing mother	.13	.06
fearful mother	-.12	-.07

preoccupied mother	.12	-.10
secure mother	.09	-.10
Step 2		
dismissing father	.02	.01
fearful father	-.07	-.11
preoccupied father	-.10	-.15
secure father	-.11	-.12
Step 3		
dismissing adolescent	.37****	.61****
fearful adolescent	-.07	-.05
preoccupied adolescent	-.23*	-.05
secure adolescent	-.04	.01
Step 4		
emotional distress	.15	.03
times your heart broken	-.06	-.09
longest adol relationship	.06	.04
times you were loved	.03	.16
number of relationships	.03	-.14
number of hearts you broke	.05	-.03
times you were in love	.13	.07

Note. Reported betas are from the final regression model.
*p <.05. ****p <.001.

Predicting Adult Fearful Attachment Scale Scores

Analysis for females revealed that their scores on the adult fearful attachment scale could not be reliably predicted, F(19, 112) = 1.32, ns, even though the predictor variables accounted for 18% of the total variance.[18] On the other hand, the regression equation was significant for males, F(19, 95) = 2.01, $p < .05$, and accounted for 29% of the total variance of males' adult fearful attachment scale scores. Mother-child attachment scale scores entered at Step 1 accounted for 12% of variance; father-child attachment scale scores entered at Step 2 accounted for a further 3%; adolescent attachment scale scores entered at Step 3 accounted for 6%; and relationship history variables entered at Step 4 accounted for a final 8%. Rating mothers highly on the dismissing scale was positively related to scoring highly on the current fearful scale. However, contrary to expectations, rating mothers lower on the fearful scale was related to having a higher rating on the current fearful scale for males (see Table 13).

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[18] As shown in the first set of regressions, parent-child attachment scores and females' adolescent fearful attachment scores were related to each other. A correlation between the independent variable and the mediator can result in reduced power for the final set of regressions (Baron & Kenny, 1986), therefore resulting in non-significant results. A separate regression with only adolescent attachment and relationship history regressed onto the current fearful scale revealed that adolescent attachment scale scores accounted for 6% of the females' variance and relationship history accounted for a further 7% of total variance, F(11, 249) = 3.37, $p < .001$. An additional regression analysis was performed, with mother-child, father-child, and relationship history as predictor variables, however this analysis was not significant either, F(15, 135) = 1.24, ns.

Table 13

Standardized Regression Coefficients (Betas) for Predictors of Adult Fearful Attachment Scale Scores

Predictor Variables	Females (n = 132)	Males (n = 115)
Step 1		
dismissing mother	-.09	.34***
fearful mother	-.20	-.28*
preoccupied mother	-.11	-.18
secure mother	-.30	-.14
Step 2		
dismissing father	.06	-.02
fearful father	-.02	.05
preoccupied father	.03	.10
secure father	-.02	.21
Step 3		
dismissing adolescent	-.01	.18
fearful adolescent	.20	.11
preoccupied adolescent	-.19	.02
secure adolescent	-.04	-.11
Step 4		
emotional distress	.13	.15
times your heart broken	.27**	.08
longest adol relationship	.07	.09
times you were loved	.07	.14
number of relationships	-.05	-.13

number of hearts you broke	.05	-.07
times you were in love	-.03	.18

Note. Reported betas are from the final regression model.
*p <.05. **p <.01. ***p <.005.

Predicting Adult Preoccupied Attachment Scale Scores

When analyzed for females, 34% of the total variance of adult preoccupied attachment scale scores was accounted for by the predictor variables, $F(19, 111) = 3.03$, $p < .001$. Mother-child attachment scale scores entered at Step 1 accounted for only 1% of variance; father-child attachment scale scores entered at Step 2 accounted for 12%; adolescent attachment scale scores entered at Step 3 accounted for 13%; and relationship history variables entered at Step 4 accounted for a final 8%. Attachment with fathers (the opposite-sex parent) had a greater impact on their preoccupied scale scores than attachment with mothers. For females' preoccupied scale scores, rating fathers higher on the fearful, preoccupied, and secure scales, having a higher adolescent preoccupied score, and reporting a high number of times their heart was broken were positively related to scoring higher on the current preoccupied attachment scale. The finding of a higher rating on the secure scale for fathers being positively related to having higher ratings on females' current preoccupied scales was unexpected.[19] As expected, the number of people whose hearts the respondent broke was negatively related to having a current preoccupied style for females. Females who rated themselves higher on the preoccupied scale were less likely to break many individuals' hearts. Table 14 lists the predictor variables' standardized beta coefficients.

When analyzed for males, 38% of the total variance of adult preoccupied attachment scale scores was accounted for by the predictor variables, $F(19, 95) = 3.11$, $p < .001$. Mother-child attachment scale scores entered at Step 1 accounted for 7% of variance; father-child attachment scale scores entered at Step 2 accounted for 2%;

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[19] Secure fathers had a higher beta coefficient than fearful fathers, yet the beta coefficient had a lower level of significance than the fearful fathers. Baron & Kenny (1986) state that this is possible in a multiple regression mediation approach.

adolescent attachment scale scores entered at Step 3 accounted for 23%; and relationship history variables entered at Step 4 accounted for a further 6% of the variance. Interestingly, a different pattern of individual predictor variables emerged for males. This time attachment with mothers (the opposite-sex parent again) had more of an impact on males' current preoccupied attachment scores than attachment with fathers. As expected, rating mothers higher on the preoccupied scale and rating the self higher on the adolescent preoccupied scale were positively related to scoring higher on the preoccupied scale, and rating the self higher on the adolescent dismissing scale was negatively related to males' current preoccupied scale scores (see Table 14).

Table 14

Standardized Regression Coefficients (Betas) for Predictors of Adult Preoccupied Attachment Scale Scores

Predictor Variables	Females (n = 131)	Males (n = 115)
Step 1		
dismissing mother	-.09	.03
fearful mother	-.03	.03
preoccupied mother	-.19	.28*
secure mother	-.15	.09
Step 2		
dismissing father	-.04	.14
fearful father	.37***	-.05
preoccupied father	.26*	.11
secure father	.40*	.24
Step 3		
dismissing adolescent	.02	-.33***
fearful adolescent	-.04	.09

preoccupied adolescent	.33***	.25*
secure adolescent	.01	.02
Step 4		
emotional distress	-.01	-.09
times your heart broken	.21*	.08
longest adol relationship	-.03	.15
times you were loved	.09	-.10
number of relationships	.03	-.04
number of hearts you broke	-.28***	-.15
times you were in love	-.04	.03

Note. Reported betas are from the final regression model.
*$p < .05$. ***$p < .005$.

Predicting Adult Secure Attachment Scale Scores

The regression equation was not significant for females, $F(19, 112) = .74$, ns. However, results were significant again for males, $F(19, 95) = 1.81$, $p < .05$, with all the predictor variables accounting for 27% of the variance. Mother-child attachment scale scores entered at Step 1 accounted for 2% of the variance; father-child attachment scale scores entered at Step 2 accounted for 1%; adolescent attachment scale scores entered at Step 3 accounted for 7%; and relationship history variables entered at Step 4 accounted for the most variance at 17%. Interestingly, having a higher number of romantic relationships was related to having higher scores on the secure scale for males. Furthermore, scoring low on the dismissing adolescent scale, reporting a low number of individuals that loved the respondent, and reporting a low number of times the respondent was in love were all related to scoring higher on the secure scale (see Table 15).

Table 15

Standardized Regression Coefficients (Betas) for Predictors of Adult Secure Attachment Scale Scores

Predictor Variables	Females (n = 132)	Males (n = 115)
Step 1		
dismissing mother	.01	-.03
fearful mother	.15	.21
preoccupied mother	-.03	.11
secure mother	.23	.21
Step 2		
dismissing father	.08	.04
fearful father	.00	-.02
preoccupied father	.07	-.01
secure father	.10	-.08
Step 3		
dismissing adolescent	-.02	-.30**
fearful adolescent	-.06	.03
preoccupied adolescent	.09	.00
secure adolescent	.07	.14
Step 4		
emotional distress	.03	-.13
times your heart broken	-.17	-.11
longest adol relationship	-.05	-.12
times you were loved	-.04	-.20*
number of relationships	.20	.27**

number of hearts you broke	.12	.12
times you were in love	-.04	-.30**

Note. Reported betas are from the final regression model.
$^{*}p \leq .05$. $^{**}p < .01$.

Summary of Results From Second Regression Analysis

This set of regression analyses tested the hypotheses that parent-child attachment would predict current attachment styles (main hypothesis), that opposite-sex parents would have more of an impact on the individuals' current scale score than same-sex parents (sub hypothesis), and that adolescent attachment styles in the most significant adolescent romantic relationship and various relationship history variables would predict current attachment. An additional hypothesis stated that adolescent attachment would account for more prediction of adult attachment than parent-child attachment. Males' scores were reliably predicted on all four scales, while females' scores were reliably predicted on the preoccupied and dismissing scales.

Overall, contributions to current attachment scale scores from mother attachment scale scores and father attachment scale scores were small. However, some support for the main and sub hypothesis relating to parent-child attachment was found. In the case of adult preoccupied scale scores, opposite-sex parents accounted for more variance in scores than the same-sex parent. Mother attachment scale scores accounted for a higher amount of variance than father attachment scale scores for males, and father attachment scale scores accounted for a much higher amount of variance than mother attachment scale scores for females. Furthermore, mother attachment scale scores also accounted for a higher percentage of variance for males' fearful scores than father attachment scale scores. For the adult dismissing and secure styles (males and females), the influence of both parents was too small to note significant differences between mothers and fathers in the amount of variance for which either of them accounted. Thus, support was found for the hypothesis that parent-child attachment would account for less variance than adolescent attachment.

Support was found for the hypotheses that adolescent attachment and past romantic relationship experiences would predict current attachment scores. Interestingly, for both females and males, adolescent attachment scale scores accounted for more variance than relationship history variables for adult dismissing and preoccupied scale scores, whereas relationship history accounted for more variance than adolescent attachment scale scores for current secure and fearful scores (only for males, whose regression equations were significant). Figure 4 contains models (for each attachment style) of the relationships found for females and males, respectively.[20] For significant findings, the percentage of variance each block accounted for is entered in the model. For non-significant findings, no percentage is entered in the model.

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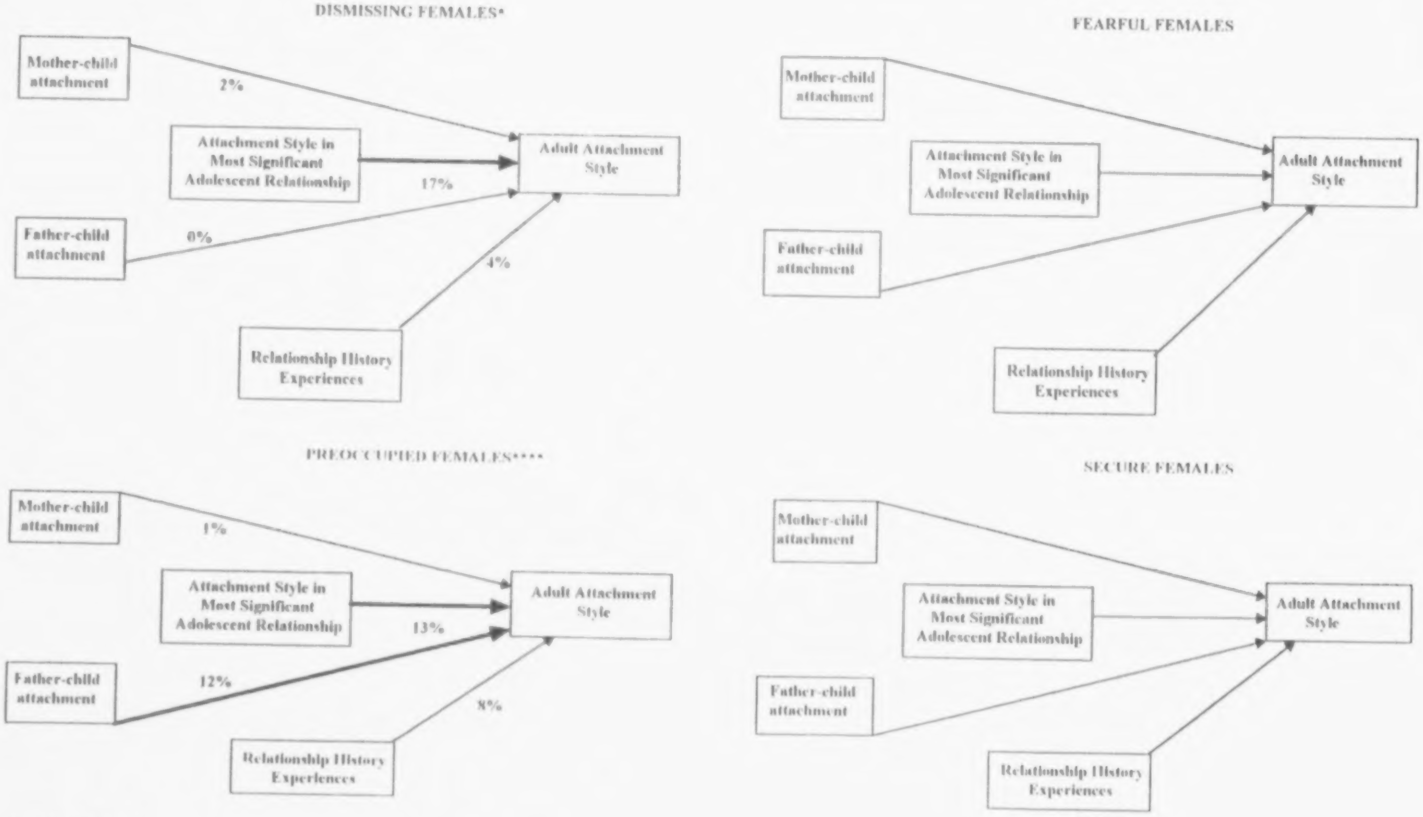
[20] See Appendix D for models containing betas of significant individual predictor variables.

Figure 5: Predicting Adult Attachment Scale Scores

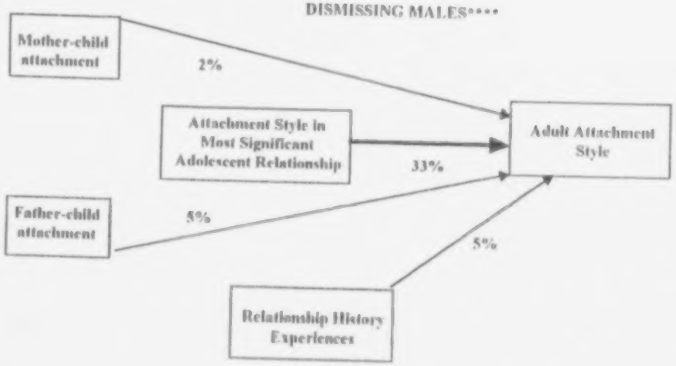
a) Predicting Females' Current Attachment Scale Scores From Parent-Child Attachment, Adolescent Attachment, and Relationship History Experiences


DISMISSING FEMALES*
Mother-child attachment
2%
Attachment Style in Most Significant Adolescent Relationship
17%
Father-child attachment
0%
Relationship History Experiences
4%
Adult Attachment Style
FEARFUL FEMALES
Mother-child attachment
Attachment Style in Most Significant Adolescent Relationship
Father-child attachment
Relationship History Experiences
Adult Attachment Style
PREOCCUPIED FEMALES****
Mother-child attachment
1%
Attachment Style in Most Significant Adolescent Relationship
13%
Father-child attachment
12%
Relationship History Experiences
8%
Adult Attachment Style
SECURE FEMALES
Mother-child attachment
Attachment Style in Most Significant Adolescent Relationship
Father-child attachment
Relationship History Experiences
Adult Attachment Style

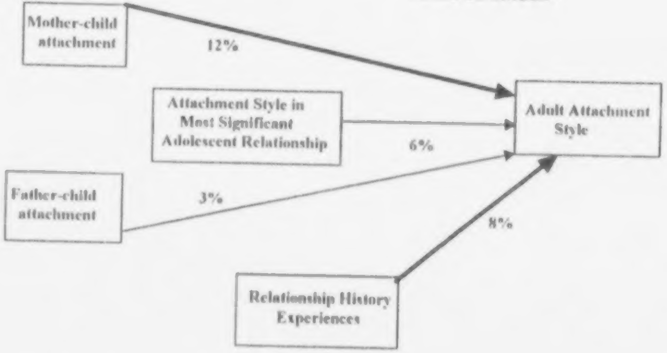
*p<.05 ****p<.001

b) Predicting Males' Current Attachment Scale Scores From Parent-Child Attachment, Adolescent Attachment, and Relationship History Experiences

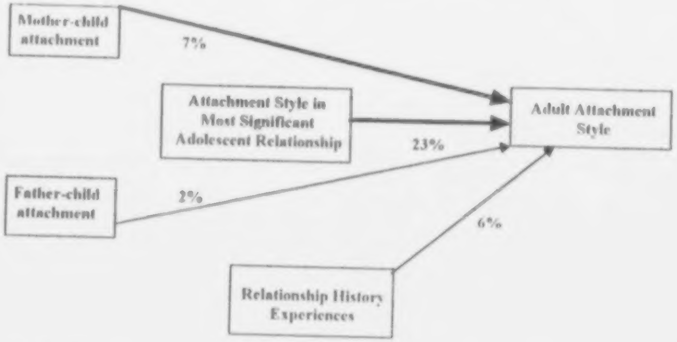
DISMISSING MALES****


Mother-child attachment
2%
Attachment Style in Most Significant Adolescent Relationship
33%
Adult Attachment Style
Father-child attachment
5%
5%
Relationship History Experiences

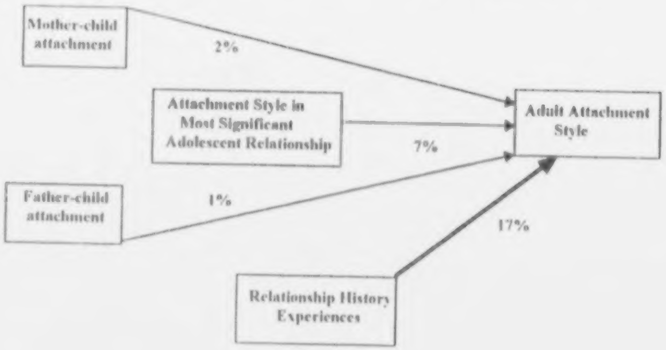
FEARFUL MALES*


Mother-child attachment
12%
Attachment Style in Most Significant Adolescent Relationship
6%
Adult Attachment Style
Father-child attachment
3%
8%
Relationship History Experiences

PREOCCUPIED MALES****


Mother-child attachment
7%
Attachment Style in Most Significant Adolescent Relationship
23%
Adult Attachment Style
Father-child attachment
2%
6%
Relationship History Experiences

SECURE MALES*


Mother-child attachment
2%
Attachment Style in Most Significant Adolescent Relationship
7%
Adult Attachment Style
Father-child attachment
1%
17%
Relationship History Experiences

*$p<.05$ ****$p<.001$

CHAPTER 5

DISCUSSION

The primary goal of this thesis was to investigate the roles of attachments with primary caregivers during childhood, attachment style in the most significant adolescent romantic relationship, and romantic relationship experiences in contributing to current attachment styles in young adults. The attachment theory perspective has stressed continuity of attachment over the lifespan (Bowlby, 1973), and further research has argued that the quality of attachment with primary caregivers during childhood plays a significant role in determining attachment styles in adult romantic relationships (i.e., Collins & Read, 1990; Hazan & Shaver, 1987). However, this investigation seems to paint quite a different picture.

Predicting Adolescent Styles From Parent-Child Attachment

Based on others' work and theorizing, it was expected that parent-child attachment would play a significant role in predicting adolescent attachment styles, and that quality of attachment with the opposite-sex parent would play the most important role. Contrary to expectations, only a small amount of support was found for this hypothesis. Parent-child attachment contributed to the prediction of adolescent attachment for only two attachment styles: males' ratings of dismissing adolescent attachment and females' ratings of fearful adolescent attachment. Interestingly, these attachment styles appeared to be particularly salient for males and females throughout the study. This notable finding will be described further in additional parts of the discussion.

In both cases it was quality of attachment with mothers that played the strongest role in predicting adolescent attachment, not quality of attachment with the opposite-sex parent. In all other cases, parent-child attachment (as measured in this research) did not appear to contribute to attachment styles in the most significant adolescent romantic relationship. This suggests that parent-child attachment may not play the significant role that other researchers have suggested it does in determining attachment styles in young adults' romantic relationship experiences.

Within an attachment theoretical framework, it would be assumed that working models of childhood attachment are internalized and continue to guide one's thoughts, attitudes, and behaviors in future relationships. However, Bartholomew (1994) states that evidence showing a direct relationship between the two factors is lacking. Furthermore, this study was examining early romantic relationships-- experiences which Bowlby has suggested may account for fluctuations in attachment styles (1979). In a study similar to this one, using scale scores of attachment categories (although the categories were slightly different: resistant/ambivalent, dependent, hostile, and avoidant), Sperling and Berman (1991) found no relationship between working models of childhood attachment and current attachment for a sample of young adults. They cautioned that the use of retrospective self-reports for both childhood attachment and adolescent attachment might influence the effectiveness of testing such a relationship (Sperling & Berman, 1991) because of the possibility of memory construction or biased reporting. Therefore these results should be interpreted with caution, as memory reconstruction may have occurred.

When parent-child attachment does affect attachment style in adolescent romantic relationships, it appears that the quality of attachment with mothers plays a more significant role than quality of attachment with fathers. This is consistent with other's findings that attachment with mothers has more of an impact on adolescents than attachment with fathers. For example, identity achievement of adolescents has been found to be related to attachment with mothers, not fathers, and attachments to mothers were found to be stronger than attachments to fathers (Benson, Harris, and Rogers, 1992). Furthermore, Carnelley and Janoff-Bulman (1992) found that relationships with mothers were most significant in predicting young adults' scores on secure, anxious/ambivalent, and avoidant scales. In a longitudinal study of children and their parents, 10-year-old children's early attachments with parents were related to their sociability level (Grossman & Grossman, 1991). Each of the three attachment groups were significantly different from each other, with the main effect coming from mothers. As sociability levels with same-sex peers may pave the way toward security or insecurity in romantic relationships with opposite-sex individuals, one could speculate that the indirect influence of mothers from childhood may then be carried through to adolescence.

Females' scores on the fearful scale were impacted by having a preoccupied, dismissing, or secure mother. A female adolescent who develops a negative view of herself based on inconsistent responsiveness from her preoccupied mother may then seek out romantic partners to achieve the security she craves. Unfortunately, her partner may not appreciate her insecurity and preoccupation, consequently treating her in a less than desirable way or ending the relationship. As a result, she may develop a sense of distrust in romantic partners, thus leading to a negative view of others. When this newly revised view of others is added to her already negative view of the self, a fearful attachment style is created. As Shaver and Hazan note, it is usually through the experience of model-disconfirming experiences that attachment styles are reshaped into new schemata (1993). Through the assimilation of new experiences about the non-responsiveness of partners, an adolescent female's preoccupied style may be transformed into a fearful style. On the other hand, a female adolescent with a dismissing mother may already have a sense of insecurity in regards to the responsiveness of others. Nevertheless, as curious adolescent, she may still enter into a romantic relationship. However, her own dismissive behavior and lack of trust in her partner may drive him away. Unfortunately, she may assimilate this experience into her working model, interpreting it as a sign of her unworthiness as a romantic partner. A newly revised view of herself as negative added to her justified view of others as untrustworthy will create a fearful attachment style. The impact of having either a dismissing or preoccupied mother suggests that the female already has a negative view of either the self or of others, therefore further experiences may change her working model more easily than if she had a positive view of both the self and others.

What about the relationship between fearful adolescent females and secure mothers? There are two possible explanations for this. First, the fearful style is an avoidant attachment style, and young adults with avoidant styles have been found to be defensive when responding to self-report measures regarding their parents (Hazan & Shaver, 1987). Accordingly, this defensiveness may have resulted in females rating their mothers' parenting more positively than was actually the case. Therefore, defensiveness, which was not measured in this self-report study, may account for the unexpected positive connection of fearful adolescent females with secure mothers. Second, while it is possible that an adult may have a secure attachment style in intimate relationships but have an insecure working model of childhood attachment (Cohn et al., 1992), it could also be possible that an individual has a secure parent-child attachment yet develops an insecure romantic relationship style.

Connections between adult romantic relationships and childhood attachment are more direct for men than for women, with women's connections between the two appearing to be influenced by their partner's working models of attachment (Cohn et al., 1992). The same connection may occur in adolescence for females, which could account for the unexpected finding that not only dismissing and preoccupied mothers but also secure mothers were related to females' fearful scale scores. Security may have been evident in childhood relationships, but experiences within the adolescent romantic relationship nurtured a more fearful style. Because respondents were asked to report their adolescent attachment retrospectively, it is not clear whether the attachment style reported was the attachment style they had before their adolescent relationship or if it is an attachment style that was possibly influenced by the relationship itself. Additional information is needed on the specific dynamics of the adolescent relationship, as attachments in their most significant adolescent romantic relationships may be contingent to a degree on their partners' attachment styles and characteristics. This could be particularly important for females.

Given that dismissing, preoccupied, and secure mother-child attachment dimensions predicted adolescent fearful attachment, it was curious to find that the fearful mother-child dimension was unrelated to adolescent fearful attachment. As the fearful style is an avoidant attachment style, defensiveness may account again for this finding. However, the restricted range obtained when rating mothers on the fearful style may have interfered with the possibility of identifying the impact of the mother-child fearful style on other variables.

Since adolescent attachment styles are based on retrospective reports, it is difficult to assess the extent to which adolescent attachment styles developed from parent-child attachment or the extent to which the adolescent styles were influenced by adolescent romantic relationship experiences. This research suggests that parent-child attachment has a limited influence on attachment styles identified in individuals' most significant adolescent romantic relationships, only affecting females' fearful adolescent scores and males' dismissing adolescent scores. Overall, it seems that as people get older, they tend to incorporate or integrate relationship experiences into their current working models (Carnelley & Janoff-Bulman, 1992). Therefore, adolescent attachment and postdissolution dating experiences may influence the continuity or lack of continuity in current working models of attachment developed in early childhood. The next section addresses the findings in this area.

Predicting Adult Attachment Styles From Parent-Child Attachment, Adolescent Attachment, and Romantic Relationship Experiences

It was expected that adolescent attachment styles and romantic relationship experiences would play a significant role in predicting adult attachment styles. It was also expected that parent-child attachment would contribute in a direct way to the prediction of current adult attachment, but that this contribution would be less than the contribution of adolescent attachment. This was based on the reasoning that the internal working models individuals develop with their primary caregivers provide the basis for the way they approach all their relationships. And, yet, these early internal working models can be altered over time as a result of other relationship experiences (cf. Carnelley & Janoff-Bulman, 1992). Thus working models of parent-child relationships would be expected to demonstrate their strongest relationship to adolescent working models. Adolescent relationship experiences would likely contribute to the alteration of these internal working models, therefore current internal working models in early adulthood would be expected to be more closely related to adolescent working models rather than to working models of parent-child attachments.

Overall, current attachment styles were reliably predicted by adolescent attachment style, romantic relationship experiences, and the direct influence of parent-child attachment, with three notable findings. First, adolescent attachment, romantic relationship experiences, and parent-child attachment were better predictors of ratings of the insecure attachment styles than of the secure attachment style. Second, males' attachment styles were predicted with greater accuracy than females' attachment styles, with all four of the current attachment styles predicted for males but only dismissing and preoccupied styles predicted for females. Third, different patterns arose within the four attachment styles, suggesting that females and males with different attachment styles may follow different relationship courses based on guidance of their working models, possibly reflecting a socialization effect (cf. Bartholomew, 1994).

Why would individuals with insecure attachment styles be more influenced by past attachments and relationship experiences than individuals with secure attachment styles? Stability of attachment styles is accomplished through selective affiliation of new experiences into existing schemata. Hazan and Shaver (1994) suggest that examination of three types of "interaction" styles (reactive, evocative, and proactive) might provide valuable information into how experiences are assimilated into a working model. A reactive interaction occurs when individuals respond to the environment based on their mental representations of the self and of others; an evocative interaction occurs when individuals act in certain ways as to elicit responses from their environment that would confirm their views of the self and others; a proactive interaction occurs when individuals create or select their environments so that the environment confirms their working models (Caspi & Bem, 1990).

One could speculate that secure individuals behave in reactive ways, reacting to new experiences rather than creating certain environments or attending selectively to events in their environment. Secure attachment styles may not be as stable as previous researchers have claimed (Scharfe & Bartholomew, 1994), therefore it may be that their abilities to react to new information or to new partners may account for the lower ability to predict their attachment styles. If they respond to new information, their attachment style may change, either temporarily or permanently. Romantic relationship experiences were much more important in predicting secure attachments for males than in predicting the other attachment dimensions for males or any dimensions for females. The conspicuousness of romantic relationship experiences for secure males may reflect a reactive pattern of interaction with the environment, as it suggests that their views of relationships are being influenced by new experiences and new partners.

On the other hand, individuals with insecure attachment styles may behave in ways that are more self-fulfilling. Insecure attachment styles identified in significant adolescent romantic relationships were strongly related to individuals' insecure attachment style ratings in adulthood, which may reflect interaction styles with the environment which are more evocative or proactive, thus confirming their views of the self and of others. One could speculate that, by creating environments that match their working model or by selectively attending to certain experiences that match their working model, they contribute to the stability of their insecure attachment styles. As a result, their working models may exert such strength that their stability is more pronounced than the stability of secure attachment styles.

The other two findings regarding adult attachment styles were that different patterns for males and females arose within the four attachment styles, and that males' attachment styles were predicted with greater accuracy than females' attachment styles. Current attachment was predicted for males on all of the attachment styles and for females on the dismissing and preoccupied styles. These findings will now be considered within discussions on each of the four adult attachment styles.

Dismissing Adults

Attachment style in the most significant adolescent romantic relationship was most predictive of females' and males' scores on the current dismissing scale, with relationship history experiences accounting for a small amount of influence. Parent-child attachment was not found to be predictive of participants' current dismissing styles. This was not surprising given that several researchers have described how dismissing individuals may idealize their parents or deny any parental rejection (e.g., Hazan & Shaver, 1987; Kobak & Sceery, 1988). The use of retrospective self-report measures has been implicated in not being able to adequately assess avoidant or dismissing individuals' idealization of their parents (Hazan & Shaver, 1987), whereas interview methods (i.e., Bartholomew and Horowitz, 1991; George et al., 1985) are able to tap into this defensiveness.

For both females and males, having a dismissing style in the adolescent relationship was highly predictive of still having a dismissing style in adulthood. This relationship was very strong for males, accounting for 33% of the variance. For females, both dismissing and preoccupied adolescent attachment styles were related to having a current dismissing attachment style. There was a positive relationship between adolescent dismissing attachment styles and adult dismissing attachment styles, but a negative relationship between adolescent preoccupied attachment styles and current dismissing attachment styles. This would make sense, as the preoccupied and dismissing styles are opposite styles in terms of their views of the self and others. A working model would need to radically change in order for a female who previously wanted to be with relationship partners and worried about them leaving her to suddenly feeling that relationships are not important and that she prefers to be on her own.

That the dismissing style is very strong for males (accounting for a high percentage of variance) is congruent with other research noticing the salience of this style for males (e.g., Griffen & Bartholomew, 1994). For example, several researchers have found that males score higher on ratings of the dismissing style (Bartholomew & Horowitz, 1991; Scharfe & Bartholomew, 1994). Gilligan (1982) has argued that women are more oriented toward attachment than men, whereas men are focused more on individuality and separation. The dismissing style fits with this argument, as a male with a dismissing style would feel that he does not need relationships and would focus more on individualization and separation from others.

Finally, only a small amount of variance in current dismissing attachment styles was accounted for by relationship history. Relationships are not of primary importance to dismissing individuals (or their importance may be suppressed or denied). Thus, it was not surprising that past relationships played little importance in contributing to dismissing individuals' working models. A dismissing working model keeps individuals in situations in which they do not readily enter relationships or it promotes denial of the impact of past relationship experiences on their feelings about love. Such individuals impact of past relationship experiences on their feelings about love. Such individuals would not be challenged to change their negative assessment of others. Consistent with this argument, dismissing individuals were least likely to report that their current ideas about love had been influenced by past romantic relationship experiences.

Preoccupied Adults

Attachment style in the most significant adolescent romantic relationship was most predictive of both females' and males' scores on the current preoccupied scale. Relationship history experiences accounted for a small amount of influence. As predicted, parent-child attachment did contribute directly to current attachment, and furthermore, it was attachment with the opposite-sex parent that contributed more than attachment with the same-sex parent.

Fathers accounted for much more influence than mothers for females' scores. Specifically, preoccupied and fearful fathers predicted females' scores on the preoccupied scale. Females who had fathers who were either inconsistent in their caregiving and responsiveness or cold and rejecting were more likely to be preoccupied and anxious about their current romantic relationships. This pattern is very similar to Collins and Read's results that anxious/ambivalent individuals reported parents who were either cold or inconsistent (1990). Secure fathers were also positively related to preoccupied females' scores, which was an unexpected finding. Theoretically, one would expect that a preoccupied individual would report parents who were inconsistent in their caregiving, sometimes being responsive and at other times not being responsive. It may be that higher ratings of secure fathers reflects preoccupied respondents' ratings of their opposite-sex parent more favorably on positive traits (the times when their father was responsive to their needs). Whatever the reason, it is clear that fathers have more of an impact than mothers on the development of their daughters' preoccupied attachment styles. On the other hand, for males, having a preoccupied mother was predictive of having a current preoccupied style. Males who had mothers who were inconsistent in their caregiving blame themselves for the perceived rejection (Bartholomew & Horowitz, 1991) and begin to depend on others for their self worth. This may be then carried into their adult relationships. Overall, results regarding the continuity of preoccupied working models from childhood into adulthood show support for Collins and Read's (1990) suggestion that it is the opposite-parent who has the most impact on individuals' working models of heterosexual romantic relationships.

In adolescence, having a preoccupied style was predictive of scoring higher on the current preoccupied scale for men and women. In addition, the adolescent dismissing style was negatively related to having a preoccupied style in adulthood for males. This points again to the strength of the dismissing adolescent style for males, as this negative relationship was even stronger than the positive relationship between the adolescent preoccupied and adult preoccupied styles for males. Griffen and Bartholomew (in press) claim that theoretically opposite patterns (in this case, preoccupied and dismissing) will occasionally correlate more highly (although negatively) with each other than patterns which are theoretically more similar to each other. Males who were dismissing in adolescence were very likely to still be dismissing in adulthood and quite unlikely to have changed their style to being preoccupied. If as adolescents, they were dismissing and rejecting of close relationships, it was unlikely that they would now be preoccupied with relationships.

Relationship history impacted on both males and females in the preoccupied style. For females, two individual predictors were particularly noteworthy. The more times females had their hearts broken and the fewer times they broke someone's heart, the more likely they were to have a current preoccupied style. This makes perfect sense when the definition of a preoccupied style is considered. Preoccupied individuals want close relationships, therefore it would be expected that they would not often break up with other people. They often find that others are reluctant to get as close as they would prefer, therefore it would be expected that they would also report a high number of people breaking up with them. Furthermore, women attend more to relationships, and more readily incorporate new relationship experiences with others into their view of the self than men (Acitelli & Holmberg, 1993; Pietromonaco & Carnelley, 1994). Therefore when preoccupied females reflect on the number of times they have wanted to be with someone else who did not want to be with them, they may conclude that they are to blame, thus maintaining and solidifying their view of the self as negative, and contributing to the stability of their preoccupied attachment style.

The finding of males scoring higher than females on ratings of the adult preoccupied style was interesting to note. Sex differences in this study in the ratings of preoccupied attachment styles and in the percentages of adolescent preoccupied styles were of particular interest. Previous research which found that men who either scored higher on the preoccupied scale or accounted for a greater proportion of those with preoccupied styles asserted that the results were probably non-replicable and therefore offered no interpretation. Research focused instead on results which corresponded more closely to gender-role stereotypes (i.e., women scoring higher on the preoccupied scale and men scoring higher on the dismissing scale). Nevertheless, this is the third replication of the findings that a higher percentage of males than females reported a preoccupied style and men's preoccupied scale scores were higher than females' preoccupied scale scores. Thus, these findings warrant interpretation.

It has been argued by some researchers that young women may be more advanced than young males in their capacity for intimacy due to the close nature of their same-sex friendships (Paul & White, 1990; Sharabany, Gershoni, & Hofman, 1981). As a result, women may feel more comfortable than men with the close intimacy which is characteristic of heterosexual romantic relationships. Men, on the other hand, may feel less comfortable about heterosexual romantic relationships because they have not had the "practice" of close, emotional connections with their male friends. Men are encouraged to be independent, which can explain previous findings of men having higher ratings than women on the dismissing scale. Yet men may also report high levels of preoccupation because of their lack of experience in close, emotional relationships. They "experience heightened attachment experiences as inconsistent with their self-representation" (Berman & Sperling, 1991, p. 438), which fosters additional confusion. It has been shown that the experience of desperate love, a type of love associated with the preoccupied style, is particularly "toxic" for men, resulting in very intense feelings (Sperling & Berman, 1991). This may account for males' higher ratings on the preoccupied scale.

Additionally, the fact that a higher percentage of men than women reported a current preoccupied style may be linked to this study's finding that a higher percentage of women than men reported a current fearful style, a finding which replicated previous research (cf. Brennan et al., 1991; Duggan & Brennan, 1994). Brennan and his colleagues (1991) have suggested that fearful individuals are more likely to be women because they both fear and desire relationships. One possible interpretation for this comes from a study of young college-aged women, in which Lutwak (1985) investigated the views of women in her sample who were classified as having a "high fear of intimacy" (29% of the total sample). Lutwak suggested that while feminism may have encouraged women to become more independent, it may have fostered a fear of romantic relationships. These fearful females had characteristics such as believing that marriage was "a trap", and having a strong desire to find a career as a way of ensuring self sufficiency while guarding against reliance on a male partner for economic security (Lutwak, 1985). Such an argument may account for the finding that women are scoring higher on the fearful style and accounting for a higher percentage in the fearful category as compared to men. Their uncertainty about their role as women and romantic partners may lead them to have a negative view of the self, while their distrust of males and marriage may lead them to have a negative view of others, thus resulting in a fearful attachment style. And it may be that females' fearful feelings contribute to males' higher scores on the preoccupied scale. If women are unsure whether or not they want to be in heterosexual romantic relationships, males may become more uncertain about their roles thus leading to greater preoccupation with relationships. Clearly, more research is needed to explore this interpretation further or to consider alternative reasons for these findings which are contrary to stereotypical gender-roles.

Research from other love perspectives may help explain these findings as well. For example, women are not more romantic than men as was typically assumed in the past (Cunningham & Antill, 1981), therefore the romanticism of men may contribute to their increased preoccupation with relationships. Furthermore, romanticism is more prevalent among younger males (Brehm, 1985). Finally, because this research was done with a sample of young adults, this interpretation can not be generalized to other populations. Older adults who may be more sure of themselves and their goals in life may report less preoccupation or fear about life and relationships. Such cohorts may provide researchers with further insight into the development of attachment styles.

Fearful Adults

Females' current ratings of fearful attachment styles could not be reliably predicted. Males' current ratings of fearful attachment styles were reliably predicted by parent-child attachment, adolescent attachment, and relationship history. Males' ratings of the extent to which their mothers displayed a dismissing caregiving style were the strongest predictors of their current fearful scores. Why would males who had a dismissing attachment style with their mother be more likely to develop a fearful attachment style as an adult? As children they likely developed a sense of the untrustworthiness of others. Combined with possibly negative relationship experiences, in which their aloofness drove others away, they may have developed a sense of themselves as also being unworthy of being loved and thus a fearful attachment style may have emerged.

Unexpectedly, fearful mothers were negatively related to having a current fearful style as a male. This could be tentatively explained in light of two previous findings. First, respondents tend to rate their opposite-sex parents less harshly than their same-sex parents on negative traits (Hazan & Shaver, 1987). Second, avoidant respondents tend to be somewhat defensive when reporting parental caregiving styles (Hazan & Shaver, 1987). Combined with the somewhat harsh wording of the description, and the socially unacceptable view that mothers could even be considered rejecting of their children, this may have led to biased answers on this variable for males. And since relationship history accounted for the second highest proportion of accounted variance, it could be that certain negative relationship experiences had been assimilated into their working model. These negative experiences could have nurtured the development of a fearful style despite the negative relationship with fearful mother-child attachment.

Secure Adults

Females' current ratings of secure attachment styles could not be reliably predicted. Males' current ratings of secure attachment styles were reliably predicted by parent-child attachment, adolescent attachment, and relationship history. However, parent-child attachment accounted for a negligible amount of direct influence. Interestingly, relationship history accounted for most of the variance in males' secure attachment scores, with adolescent attachment accounting for a small amount of influence. The dismissing style in adolescent was again important for males, having a negative relationship with a current secure style. Males who reported a dismissing style in their most significant adolescent romantic relationship were unlikely to have a current secure style.

For this attachment style, relationship history accounted for a much larger amount of variance than the other blocks of variables. The fewer times males reported that someone had been in love with them and that they had been in love with someone, and the more relationships they reported having had, the higher rating they had on the secure scale. This pattern of relationship variables was interesting. A secure male enters into several romantic relationships, and he neither loves impulsively nor has partners who profess love prematurely. It may be that he finds partners who are in no rush to become overly intimate before "it feels right". Consistent with this speculation, it has been found that secure individuals are generally drawn towards other secure individuals (Collins & Read, 1990; Kirkpatrick & Davis, 1994). A secure male trusts others and has high self regard therefore he is willing to enter into relationships even though previous relationships may have been unsuccessful. Increased experience in romantic relationships may then lead to greater security in relationships.

Females' secure attachments could not be predicted. This may be because of the more complex nature surrounding the process in which females assimilate new information into their existing relationship schemata. For example, women score higher on evaluative thinking and reminiscent thinking than men (Acitelli & Holmberg, 1993). This increased reflection on relationships may mean that women's attachment styles develop in a different way than men's attachment styles. The connection between females' attachment styles and their past attachments are mediated by their partner's working models of attachment (Cohn et al., 1992). This could mean that women's attachment styles are ultimately less stable than men's attachment styles. Furthermore, secure males and secure females appear to love in different ways (Humble & Skrypnek, 1994). Secure men may desire exclusive but non-possessive relationships characterized by strong physical attraction and romantic love, while secure women desire caring, close, and exclusive but non-possessive relationships based on physical attraction, romantic love, and companionship (Humble & Skrypnek, 1994). As a result, the development of men's attachment styles may be more straight forward and quite different from the development of secure females' attachment styles.

In summary, it appears that the quality of parent-child attachment may not play the significant role others have suggested it plays in adult attachment styles in romantic relationships. Furthermore, internal working models may not be as stable as Bowlby's work and others have claimed. When examining the development of the four adult attachment styles, two interesting patterns became evident.

First, individuals with higher ratings on the insecure adult styles reported more influence from parents than individuals with secure styles. The type of influence from mothers and fathers was different for males and females depending on the insecure style being examined. Attachment with the opposite-sex parent was more evident for two of the insecure current attachment styles (preoccupied for both females and males and the fearful style for males) than the other styles. Second, adolescent attachment styles and romantic relationship history had different impacts on adult attachment styles depending on the attachment style being examined. Attachment styles in the most significant adolescent romantic relationship were most predictive of two of the insecure styles for males and females (preoccupied and dismissing), with relationship history also accounting for some influence. On the other hand, relationship history accounted for more variance for males in the current fearful and secure styles, with adolescent attachment styles accounting for less influence than relationship history, and interestingly, current fearful and secure styles could not be predicted for females. More in-depth focus on what Feeney and Noller (1992) refer to as "postdissolution dating" patterns may reveal some possible reasons for these differences. Although Scharfe (1992) did not find a significant relationship between several types of interpersonal and non-interpersonal life events and their ability to affect attachment style stability, she stressed the importance of looking beyond events themselves to the meanings given to events, the amount of control individuals perceive they have over events, and their reactions to events.

Stability in Adolescent and Adult Attachment Styles

Like previous research (Bartholomew & Horowitz, 1991; Duggan & Brennan, 1992; Feeney, Noller, & Hanrahan, 1994), this research found that a little less than half the sample reported secure adult attachment styles, about one quarter reported fearful attachment styles, and less than one fifth reported dismissing or preoccupied adult attachment styles. When the adult attachment styles were compared to attachment styles identified for individuals' most significant adolescent romantic relationships, 43% of individuals reported the same attachment style in both adolescence and currently in adulthood. Not surprisingly, this percentage was lower than the 59% stability rate over eight months reported by Scharfe and Bartholomew (1994) for the self-report measure. More than 50% of the sample reported a change in attachment style from adolescent to adulthood. As this study inquired about a long period of time (around five to seven years), it suggests the likelihood of other life experiences affecting the development of attachment styles.

There was an overall decrease in the percentage of preoccupied attachment styles from adolescence to adulthood, and there was an increase in the percentage of secure styles. Others have suggested that attachment styles may move in the direction of security within long-term or committed relationships (Kobak and Hazan,1991). Attachment styles, in general, may become more secure over the course of the life-span.

Kirkpatrick and Hazan (1994) caution against the use of retrospective self-report measures in adult attachment as they found that one-third of their participants were unable to correctly remember their attachment style they had identified four years earlier. They found that individuals were relying on their current attachment as a basis for claiming their previous attachment (Kirkpatrick & Hazan, 1994). Such a concern could be applied to this study. Is the 43% stability rate in this study an accurate rate?

Each relationship an individual has is likely to be qualitatively different in some way from previous relationships, therefore it may be difficult for individuals to try to generalize about their relationship experiences. This may be particularly salient for individuals whose attachment styles have changed, because they had more difficulty accurately remembering their past style regardless of what attachment style they currently or previously reported (Kirkpatrick & Hazan, 1994). However, to the best of my knowledge, this is the only study in which individuals were asked about their previous attachment style in a *particular* or *specific* romantic relationship. Acitelli and Holmberg reason, "given that [long-term mental models] are tailored to a specific relationship, mental models are also likely to provide a more reliable memory reconstruction aid than more generalized schemas of a global nature" (1993, p. 91). Therefore, asking about a particular relationship may reduce such inaccurate memory reconstruction because it may be easier for an individual to reflect about one relationship from several years earlier rather than her or his "general" way of behaving in romantic relationships. Furthermore, the fact that only a 43% stability rate was observed suggested that the results may be accurate reflections of their attachment styles, as respondents were not necessarily using their current attachment styles as a basis for remembering their past styles. In any event, if there is some reconstruction or distortion, it is likely in the direction of overestimating consistency within attachment styles. Our results showed that at least 57% of individuals' current attachment styles differed from their working models of attachment from their most significant adolescent romantic relationships, therefore it does not appear that an overestimation was occurring. Clearly, working models of attachment are not as stable as previous research has suggested.

Emotional Distress

Interruption of felt security with attachment figures results in the activation of attachment behavior (Bowlby, 1980), therefore it was expected that termination of significant adolescent romantic relationships would result in different levels of emotional distress for individuals with different attachment styles. Support was found for the hypothesis that emotional distress would be related in a theoretically meaningful way to the attachment style identified in individuals' most significant adolescent romantic relationships. Those who reported preoccupied adolescent attachment styles reported higher amounts of emotional distress than the other three styles following the ending of their most significant adolescent romantic relationship, and reported more often that their partner had ended the relationship. Not surprisingly, individuals who perceived the adolescent relationship to have been ended by their partner reported the highest amounts of distress, and those who reported they had ended the adolescent relationship reported the lowest levels of distress. Dismissing individuals reported significantly lower amounts of emotional distress than the other three styles, and tended to also report that they had terminated the relationship themselves. These results are similar to Feeney and Noller's (1992) findings that anxious/ambivalent individuals reported being highly upset whereas avoidant individuals reported low amounts of distress, although they had not found a relationship between attachment style and perception of who ended the relationship. Furthermore, the finding that males and females in the different adolescent attachment styles did not differ in meaningful ways from each other in their emotional responses to relationship loss was congruent with previous studies on reactions to relationship dissolution (e.g., Baumeister et al., 1993; Hazan & Shaver, 1987; Simpson, 1990).

If one considers attachment theory to be a theory of affect regulation (Kobak & Sceery, 1988), the different amounts of emotional distress that individuals in each of the attachment styles experienced after separation from their attachment figure can be explained as ways of regulating their emotional responses and ultimately their sense of security or insecurity. Dismissing individuals would report low amounts of emotional distress because their internal working model would be structured or guided by rules that suppress acknowledgement or reduce the amount of negative affect after separation from an attachment figure (Kobak & Sceery, 1988). Such responses are *deactivating strategies* which inhibit the attachment system (Dozier & Kobak, 1992). Nevertheless, physiological studies show that dismissing adults may still be distressed when reflecting on salient attachment issues despite no overt signs of distress (Dozier & Kobak, 1992), similar to avoidant infants who do not appear to be distressed upon separation from their mother in the Strange Situation experiment yet overall cardiac patterns reveal that they are aroused (Spangler & Grossman, 1993). Additionally, perceptions of low amounts of emotional distress would allow dismissing adults to maintain a positive sense of self while confirming their view that others can not be trusted or relationships are not worth the effort because they ultimately end.

Following this line of thought, preoccupied individuals would obviously report higher amounts of emotional distress because they want to be very close with individuals yet find that others are not as eager as them for such intense closeness. Their working model would be guided by rules that "direct attention toward distress" (Kobak & Sceery, 1988, p. 142). Like individuals with anxious/ambivalent attachment styles, they are probably not prepared for break-ups (Feeney & Noller, 1990, 1991). As the partners who were usually "rejected", they would experience more negative affect than positive affect and their self esteem would be lowered (Baumeister et al., 1993). Therefore, the high degree of emotional distress preoccupied individuals experience when their relationships end reinforces the fact that there must be something wrong with themselves, thereby maintaining or reinforcing more strongly their negative view of the self.

In addition, individuals in the current attachment styles also tended to differ from each other in the amount of distress they reported. Individuals with current fearful or preoccupied styles reported the highest amounts of emotional distress and individuals with current dismissing styles reported the lowest emotional distress levels. This suggests that the ending of important adolescent romantic relationships and consequently the loss of romantic attachment figures in adolescents' lives may have lasting effects on individuals' working models of attachment. Congruent with this line of reasoning, the greater emotional distress individuals reported, the more likely they were to say that their current ideas about love were influenced by past relationship experiences. Interestingly, respondents with current fearful attachment styles also felt they had been strongly influenced in the way they felt their current ideas about love had been influenced by past relationship experiences. It may be that currently fearful individuals have not been able to deal effectively in an emotional and cognitive way with past rejections and emotional distress, thus strengthening their working model that views the self as unworthy of attachment figures' responsiveness. At the same time, reminiscent thinking (Acitelli & Holmberg, 1993) about undesirable events may reinforce their views of others as being unreliable, therefore maintaining a view of others as negative. Such unresolved grief is also associated with the preoccupied attachment style (Main, personal communication, cited in Hazan & Shaver, 1992). Preoccupied individuals' inabilities to come to terms with the past may confirm to them that they are unlovable, thus bolstering their view of the self as unworthy. Furthermore, "ambivalence toward the attachment figure can impede emotional acceptance, partly because there will be confusion regarding the nature of feelings, and partly because self-blame, guilt, and remorse may complicate the pain of loss" (Weiss, 1988, p. 49). Bowlby (1980) states that some individuals never get over the loss of an attachment figure, especially those who have insecure attachments.

Overall, emotional distress did not emerge as a significant individual predictor for adult attachment styles, however this could be because emotional distress was inextricably related to the adolescent attachment styles, and therefore its impact could not be measured separately. Its impact may have been masked by the significant role of the adolescent attachment style in predicting current styles. Nevertheless, attachment can not be discussed without considering the impact of loss of attachment figures (Hazan & Shaver, 1992), and Weiss (1988) suggests the importance of tracing back to individuals' reactions to relationship loss to determine why insecure styles may fail to recover from loss.

Conclusions

This study sought to examine the effect of attachments with primary caregivers, and the mediating effects of attachment style in the most significant adolescent romantic relationship and romantic relationship experiences on the development of current attachment styles internalized from childhood attachments with parents. First, the findings suggest that parent-child attachment does not play as much of a role in determining adolescent attachment style as hypothesized. Second, early childhood internal working models appear to be altered through assimilation of new experiences. Although for the most part parent-child attachment was not strongly related to adolescent attachment in the most significant adolescent romantic relationship, it was directly related to some insecure adult attachment styles. Finally, adolescent attachment and relationship history were related more strongly to current attachment than parent-child attachment.

Baron and Kenny (1986) state, "whereas moderator variables specify when certain effects will hold, mediators speak to how or why such effects occur" (p. 1176). Different patterns were observed for males and females in the four attachment styles. It may be that gender *moderates* attachment pathways whereas adolescent attachment and postdissolution dating patterns *mediate* the development of attachment styles. First, depending on gender, specific attachment styles evolved in different ways, suggesting a possible moderation effect. As Kobak and Hazan (1991) suggest, future studies should consider how females and males differ or are similar in their ways of assimilating and updating their working models. These results point to the importance of continuing to study adult attachment styles within the context of how males and females are socialized in different ways. Second, divergent adolescent relationships and additional relationship experiences contributed to the way various attachment pathways developed, thus suggesting a possible mediation effect. The lack of results for parent-child attachment predicting adolescent attachment prevents one from making any definite conclusions about the mediating influence of adolescent attachment in the most significant adolescent romantic relationship. However, the strength of the adolescent attachment indicates that it may be a fairly strong mediator.

Implications of the Study

The findings in this research can be used by counsellors, social workers, and psychologists in various settings. Adolescent relationships can be explored in greater detail with adolescents to help identify their impact on adolescents' ways of relating to other people. Parents and friends can be encouraged to be supportive and to take adolescents' feelings and thoughts regarding their romantic relationships seriously. The three types of interaction styles (reactive, evocative, and proactive) can be used to explore the developmental pathways of certain attachment styles. Social workers and psychologists can work with individuals and couples to explore their attachment styles and relationship histories, and investigate the ways these factors interact with their environment. For example, are individuals being reactive in only being responsive to partners whose behaviors ultimately reinforce their fearful feelings of attachment which emerged as a result of a traumatic adolescent romantic relationship? Are couples being evocative in that the behaviors deriving from their working models elicit behaviors from their partners that then confirm their expectations about the self and about others? Are teenagers being proactive in their postdissolution dating behaviors by selecting certain environments that allow their dismissing attachment styles to grow and flourish while rejecting environments that could mean possible change for their attachment styles? Helping individuals understand the meanings and feelings behind their behaviors and their reactions to others' behaviors, can help them break free from possibly self-defeating actions and move toward increased security and happiness in intimate relationships.

Recommendations for Future Research

This study expanded on previous adult attachment research in several ways. First, it not only replicated previous findings regarding percentages of the four attachment styles, but it also used Bartholomew's 4-category model to explore the impact of previous attachments on the development of current attachment styles. In general, it has provided support for the use of a 4-category model of adult attachment, showing that the two avoidant styles develop in different ways, with the dismissing style being more salient for males and the fearful style being more salient for females. Second, it examined the connection of emotional distress following relationship loss with four categories of adult attachment rather than three categories, showing clear differences between the styles in the amount of emotional distress reported. Third, despite the use of retrospective self-report measures, this research uncovered several interesting findings which could be explored further through different methods such as interviews with individuals and couples and through longitudinal research.

First, parent-child attachment did not play as much of a significant role as initially hypothesized in determining adolescent attachment styles (as it was measured in this study); however, longitudinal research could be more effective in determining the relationship between these two variables. Second, parent-child attachment also does not play as much of a role in determining adult attachment styles as previous research suggested, although certain types of parental caregiving styles may have more of an impact on individuals with insecure styles than individuals with secure styles. This finding can be explored further. Additionally, while working models of parent-child attachment have been shown to be strongly related to the ways that individuals currently parent their own children (Main et al., 1985), it may be that specific working models for certain types of romantic relationships need to be considered in examining their impact on adult attachment styles in romantic relationships rather than the working models of parent-child relationships (cf. Collins & Read, 1994).

Second, this research has shown the different roles that adolescent attachment and relationship history play in the development of the four attachment styles. As this is the first study to suggest that adolescent attachment and romantic relationship experiences may play different roles in the development of adult attachment styles, more research is needed to explore the importance of these factors in contributing to adult attachment in romantic relationships.

Third, as women may take into account their partners' working models much more than men (Cohn et al., 1992), research with couples is needed to consider the relationship and not just the individual person within the relationship. Furthermore, the different pathways for males' and females' attachment styles emphasizes the point that adult attachment research should continue to explore the effects of gender socialization on attachment patterns for both sexes. Longitudinal research would be more effective in examining causality of these variables.

Finally, this study highlights the significance of adolescents' romantic relationships in determining the ways that young adults love. Additional information is needed on the adolescent relationship and its particular dynamics, such as the characteristics and attachment style of adolescents' dating partners, to determine more precisely how significant adolescent relationships affect attachment style development. Just as attachments in early childhood are hypothesized to provide a blueprint for interacting in future relationships, early serious romantic relationships surely must have some impact on the ways that individuals view themselves and others in intimate relationships. Although adolescent relationships are different from adult romantic relationships in some ways (Levesque, 1993), dating patterns established in adolescence may provide a basis for how individuals view later intimate relationships (Rice, 1984). Therefore, romantic relationships in adolescence may have more importance than previously thought in contributing to personality and social development.

REFERENCES

Acitelli, L., & Holmberg, D. (1993). Reflecting on relationships: The role of thoughts and memories. In D. Perlman & W. H. Jones (Eds.), *Advances in Personal Relationships: Vol. 4* (pp. 71-100). London: Jessica Kingsley.

Ainsworth, M. D. (1989). Attachments beyond infancy. *American Psychologist, 44,* 709-716.

Ainsworth, M. D., Blehar, M. C., Waters, E., & Wall, S. (1978). *Patterns of attachment: A psychological study of the strange situation*. Hillsdale, NJ: Lawrence Erlbaum.

Bailey, W. C., Hendrick, C., & Hendrick, S. S. (1987). Relation of sex and gender role to love, sexual attitudes, and self-esteem. *Sex Roles, 16,* 637-648.

Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychology research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology, 51,* 1173-1182.

Bartholomew, K. (1990). Avoidance of intimacy: An attachment perspective. *Journal of Social and Personal Relationships, 7,* 147-178.

Bartholomew, K. (1991). *Relationship questionnaire.* Unpublished manuscript. Simon Fraser University, Burnaby, B.C..

Bartholomew, K. (1991). *Peer Attachment prototypes.* Unpublished manuscript. Simon Fraser University, Burnaby, B.C..

Bartholomew, K. (1991). *Family attachment group prototypes.* Unpublished manuscript. Simon Fraser University, Burnaby, B.C..

Bartholomew, K. (1993). From childhood to adult relationships: Attachment theory and research. In S. Duck (Ed.), *Understanding relationships: Learning about relationships* (Vol. 2, pp. 30-62). Newbury Park, CA: Sage.

Bartholomew, K. (1994). Assessment of individual differences in adult attachment. *Psychological Inquiry, 5,* 23-67.

Bartholomew, K., & Horowitz, L. M. (1991). Attachment styles among young adults: A test of a four-category model. *Journal of Personality and Social Psychology, 61,* 226-244.

Baumeister, R. F., Wotman, S. R., & Stillwell, A. M. (1993). Unrequited love: On heartbreak, anger, guilt, scriptlessness, and humiliation. *Journal of Personality and Social Psychology, 64,* 377-394.

Belsky, J. (1990). Parental and nonparental child care and children's socioemotional development: A decade in review. *Journal of Marriage and the Family, 52,* 885-903.

Belsky, J., Fish, M., & Isabella, R. (1991). Continuity and discontinuity in infant negative and positive emotionality: Family antecedents and attachment consequences. *Developmental Psychology, 27,* 421-431.

Benson, M. J., Harris, P., B., Rogers, C. S. (1992). Identity consequences of attachment to mothers and fathers among late adolescents. *Journal of Research on Adolescence, 2,* 187-204.

Berman, W. H., & Sperling, M. B. (1991). Parental attachment and emotional distress in the transition to college. *Journal of Youth and Adolescence, 20,* 427-440.

Berman, W. H., & Sperling, M. B. (1994). The structure and function of adult attachment. In M. B. Sperling & W. H. Berman (Eds.), *Attachment in adults: Clinical and developmental perspectives* (pp. 3-28). New York: Guildford Press.

Bowlby, J. (1973). *Attachment and loss: Vol. 2. Separation, anxiety, and anger*. London: Hogarth Press.

Bowlby, J. (1979). *The making and breaking of affectional bonds*. London: Tavistock.

Bowlby, J. (1980). *Attachment and loss: Vol. 3. Loss*. New York: Basic Books.

Bowlby, J. (1988). *A secure base: Parent-child attachment and healthy human development*. New York: Basic Books.

Bradford, E., & Lyddon, W. J. (1993). Current parental attachment: Its relation to perceived psychological distress and relationship satisfaction in college students. *Journal of College Student Development, 34,* 256-260.

Brehm, S. S. (1985). *Intimate Relationships.* New York: McGraw-Hill.

Brennan, K. A., Shaver, P. R., & Tobey, A. E. (1991). Attachment styles, gender and parental problem drinking. *Journal of Social and Personal Relationships, 8,* 451-466.

Campos, J., Barrett, K., Lamb, M., Goldsmith, H., & Stenberg, C. (1983). Socioemotional development. In M. Haith & J. Campos (Eds.), Handbook of child psychology: Vol. 2 Infancy and psychobiology (pp. 783-915). New York: Wiley.

Carnelley, K. B., & Janoff-Bulman, R. (1992). Optimism about love relationships: General vs. specific lessons from one's personal experiences. Journal of Social and Personal Relationships, 9, 5-20.

Carnelley, K. B., Pietromonaco, P. R., & Jaffe, K. (1994). Depression, working models of others, and relationship functioning. Journal of Personality and Social Psychology, 66, 127-140.

Caspi, A., & Bem, D. J. (1990). Personality continuity and change across the life course. In L. A. Pervin (Ed.), Handbook of personality: Theory and research (pp. 549-575). NY: Guilford.

Cohn, D. A., Silver, D. H., Cowan, C. P., Cowan, P.A., & Pearson, J. (1992). Working models of childhood attachment and couple relationships. Journal of Family Issues, 13, 432-449.

Collins, N. L., & Read, S. J. (1990). Adult attachment, working models, and relationship quality in dating couples. Journal of Personality and Social Psychology, 58, 644-663.

Collins, N. L., & Read, S. J. (1994). Cognitive representations of attachment: The structure and function of working models. In K. Bartholomew & D. Perlman (Eds.), Advances in personal relationships: Vol. 5. Attachment processes in adulthood (pp. 53-90). London: Jessica Kingsley.

Cunningham, J. D., & Antill, J. K. (1981). Love in developing relationships. In S. Duck & R. Gilmour (Eds.), Personal relationships 2: Developing personal relationships (pp. 27-51). London: Academic Press.

Dozier, M., & Kobak, R. R. (1992). Psychophysiology in attachment interviews: Converging evidence for deactivating strategies. Child Development, 63, 1473-1480.

Duggan, E. S., & Brennan, K. A. (1994). Social avoidance and its relation to Bartholomew's adult attachment typology. Journal of Social and Personal Relationships, 11, 147-153.

Feeney, J. A. (1994). Attachment style, communication patterns, and satisfaction across the life cycle of marriage. Personal Relationships, 1, 333-348.

Feeney, J. A., & Noller, P. (1990). Attachment style as a predictor of adult romantic relationships. Journal of Personality and Social Psychology, 58, 281-291.

Feeney, J. A., & Noller, P. (1991). Attachment style and verbal descriptions of romantic partners. Journal of Social and Personal Relationships, 8, 187-215.

Feeney, J. A. & Noller, P. (1992). Attachment style and romantic love: Relationship dissolution. Australian Journal of Psychology, 44, 69-74.

Feeney, J. A., Noller, P., & Callan, V. J. (1994). Attachment style, communication and satisfaction in the early years of marriage. In K. Bartholomew & D. Perlman (Eds.), Advances in personal relationships: Vol. 5. Attachment processes in adulthood (pp. 269-308). London: Jessica Kingsley.

Feeney, J. A., Noller, P., & Hanrahan, M. (1994). Assessing adult attachment. In M. B. Sperling & W. H. Berman (Eds.), Attachment in adults: Clinical and developmental perspectives (pp. 128-152). NY: Guilford Press.

Feeney, J. A., Noller, P., & Patty, J. (1993). Adolescents' interactions with the opposite sex: Influence of attachment style and gender. Journal of Adolescence, 16, 169-186.

George, C., Kaplan, N., & Main, M. (1985). Attachment interview for adults. Unpublished manuscript. University of California, Berkeley.

Gilligan, C. (1982). In a different voice: Psychological theory and women's development. Cambridge, MA: Harvard University Press.

Griffen, D. & Bartholomew, K. (1994). The metaphysics of measurement: The case of adult attachment. In K. Bartholomew & D. Perlman (Eds.), Advances in personal relationships Vol. 5: Attachment processes in adulthood (pp. 17-52). London: Jessica Kingsley.

Griffin, D., & Bartholomew, K. (in press). Models of the self and other: Fundamental dimensions underlying measures of adult attachment. Journal of Personality and Social Psychology.

Grossman, K. E., & Grossman, K. (1991). Attachment quality as an organizer of emotional and behavioral responses in a longitudinal perspective. In C. Murray Parkes & J. Stenvenson-Hinde (Eds.), Attachment across the life cycle (pp. 93-114). London: Routledge.

Harvey, J. H., Hendrick, S. S., & Tucker, K. (1988). Self-report methods in studying personal relationships. In S. W. Duck (Ed.), Handbook of personal relationships (pp. 99-113). Chichester, England: Wiley.

Hatfield, E., & Rapson, R. (1987). Passionate love: New directions in research. In W. Jones & D. Perlman (Eds.), Advances in personal relationships: Vol. 1 (pp. 109-139). Greenwich, CT: JAI Press.

Hazan, C., & Shaver, P. (1987). Romantic love conceptualized as an attachment process. Journal of Personality and Social Psychology, 52, 511-524.

Hazan, C., & Shaver, P. (1992). Broken attachments: Relationship loss from the perspective of attachment theory. In T. Orbuch (Ed.), Close relationship loss: Theoretical approaches (pp. 90-108). New York: Springer-Verlag.

Hazan, C., & Shaver, P. R. (1994). Deeper into attachment theory. Psychological Inquiry, 5, 68-79.

Hendrick, C., & Hendrick, S. (1986). A theory and method of love. Journal of Personality and Social Psychology, 50, 392-402.

Hendrick, C., Hendrick, S., Foote, F., & Slapion-Foote, M. (1984). Do men and women love differently? Journal of Social and Personal Relationships, 1, 177-195.

Hill, C. T., Rubin, Z., & Peplau, L. A. (1976). Breakups before marriage: The end of 103 affairs. Journal of Social Issues, 32, 147-168.

Hinde, R. A. (1983). Ethology and child development. In M Haith & J. Campos (Eds.), Handbook of child psychology: Vol. 2. Infancy and psychobiology (pp. 27-93). NY: Wiley.

Humble, A. M., & Skrypnek, B. J. (1994, November). Sex differences in the relationship between attachment styles and loving styles in adults. Paper presented at the annual meeting of the National Council on Family Relations, Minneapolis, MN.

Keelan, J. P. R., Dion, K. L., & Dion, K. K. (1994). Attachment style and heterosexual relationships among young adults: A short-term panel study. Journal of Social and Personal Relationships, 11, 201-214.

Kirkpatrick, L. A., & Davis, K. E. (1994). Attachment style, gender, and relationship stability: A longitudinal analysis. Journal of Personality and Social Psychology, 66, 502-512.

Kirkpatrick, L. A., & Hazan, C. (1994). Attachment styles and close relationships: A four year prospective study. Personal Relationships, 1, 123-142.

Kobak, R. R., & Hazan, C. (1991). Attachment in marriage: Effects of security and accuracy of working models. Journal of Personality and Social Psychology, 60, 861-869.

Kobak, R. R., & Sceery, A. (1988). Attachment in late adolescence: Working models, affect regulation, and representations of self and others. Child Development, 59, 136-146.

Lee, J. A. (1973). The colors of love: An exploration of the ways of loving. Don Mills, Ontario: New Press.

Lee, J.A. (1988). Love-styles. In R. J. Sternberg & M. L. Barnes (Eds.), The psychology of love (pp. 38-67). New Haven: Yale University Press.

Levesque, R. J. R. (1993). The romantic experience of adolescents in satisfying love relationships. Journal of Youth and Adolescence, 22, 219-251.

Levy, M. B., & Davis, K. E. (1988). Lovestyles and attachment styles compared: Their relations to each other and to various relationship characteristics. Journal of Social and Personal Relationships, 5, 439-471.

Lopez, F.G., & Gover, M. R. (1993). Self-report measure of parent-adolescent attachment and separation-individuation: A selective review. Journal of Counseling and Development, 71, 560-569.

Lutwak, N. (1985). Fear of intimacy among college women. Adolescence, XX(77), 15-20.

Main, M., Kaplan, N., & Cassidy, J. (1985). Security in infancy, childhood, and adulthood: A move to the level of representation. In I. Bretherton & E. Waters (Eds.), Growing points of attachment theory and research (pp. 66-104). Chicago: University of Chicago Press.

McCormick, C. B., & Kennedy, J. H. (1994). Parent-child attachment working models and self-esteem in adolescence. Journal of Youth and Adolescence, 23, 1-18.

Mei-ha Wong, M., & Csikszentmihalyi, M. (1991). Affiliation motivation and daily experience: Some issues on gender differences. Journal of Personality and Social Psychology, 60, 154-164.

Mikulincer, M., & Erev, I. (1991). Attachment style and the structure of romantic love. British Journal of Social Psychology, 30, 273-291.

Noller, P., & Feeney, J.A. (1994). Whither attachment theory: Attachment to our caregivers or to our models? Psychological Inquiry, 5, 51-56.

Parker, G. (1989). The parental bonding instrument: Psychometric properties reviewed. Psychiatric Development, 7, 317-335.

Parker, G., Tupling, H., & Brown, L. B. (1979). A parental bonding instrument. British Journal of Medical Psychology, 52, 1-10.

Paul, E. L., & White, K. M. (1990). The development of intimate relationships in late adolescence. Adolescence, XXV(98), 375-400.

Peplau, L. A., & Gordon, S. L. (1985). Women and men in love: Gender differences in close heterosexual relationships. In V. O'Leary, R. K. Unger, & B. S. Wallston (Eds.), Women, gender, and social psychology (pp. 257-291). Hillsdale, NJ: Lawrence Erlbaum.

Pietromonaco, P. R., & Carnelley, K. B. (1994). Gender and working models of attachment: Consequences for perceptions of self and romantic relationships. Personal Relationships, 1, 63-82.

Pistole, M. C. (1989). Attachment in adult romantic relationships: Style of conflict resolution and relationship satisfaction. Journal of Social and Personal Relationships, 6, 505-510.

Radecki-Bush, C., Farrell, A. D., & Bush, J. P. (1993). Predicting jealous responses: The influence of adult attachment and depression on threat appraisal. Journal of Social and Personal Relationships, 10, 569-588.

Rice, F. P. (1984). The adolescent: Development, relations, and culture (4th ed.). Boston: Allyn and Bacon.

Rothbard, J. C., & Shaver, P. R. (1994). Continuity of attachment across the life span. In M. B. Sperling & W. H. Berman (Eds.), Attachment in adults: Clinical and developmental perspectives (pp. 31-71). New York: Guilford Press.

Rubin, L. (1983). Intimate strangers: Men and women together. New York: Harper and Row.

Rubin, Z., Peplau, L. A., & Hill, C. T. (1981). Loving and leaving: Sex differences in romantic attachments. Sex Roles, 7, 821-835.

Scharfe, E. A. (1992). Stability of attachment patterns in young adults. Unpublished master's thesis, Simon Fraser University, Burnaby, B.C..

Scharfe, E. & Bartholomew, K. (1994). Reliability and stability of adult attachment patterns. Personal Relationships, 1, 23-43.

Schneider Rosen, K., & Rothbaum, F. (1993). Quality of parental caregiving and security of attachment. Developmental Psychology, 29, 358-367.

Senchak, M., & Leonard, K. E. (1992). Attachment styles and marital adjustment among newlywed couples. Journal of Social and Personal Relationships, 9, 51-64.

Sharabany, R., Gershoni, R., & Hofman, J. E. (1981). Girlfriend, boyfriend: Age and sex differences in intimate friendship. Developmental Psychology, 17, 800-808.

Shaver, P. R., & Hazan, C. (1988). A biased overview of the study of love. Journal of Social and Personal Relationships, 5, 473-501.

Shaver, P. & Hazan, C. (1993). Adult romantic attachment: Theory and evidence. In D. Perlman & W. H. Jones (Eds.), Advances in personal relationships Vol. 4 (pp. 29-70). London: Jessica Kingsley.

Shaver, P., Hazan, C., & Bradshaw, D. (1988). Love as attachment: The integration of three behavioral systems. In R. J. Sternberg & M. L. Barnes (Eds.), The psychology of love (pp. 68-99). New Haven: Yale University Press.

Simpson, J. (1987). The dissolution of romantic relationships: Factors involved in relationship stability and emotional distress. Journal of Personality and Social Psychology, 53, 683-692.

Simpson, J. (1990). Influence of attachment styles on romantic relationships. Journal of Personality and Social Psychology, 59, 971-980.

Spangler, G., & Grossman, K. E. (1993). Biobehavioral organization in securely and insecurely attached infants. Child Development, 64, 1439-1450.

Sperling, M. B., & Berman, W. H. (1991). An attachment classification of desperate love. Journal of Personality Assessment, 56, 45-55.

Sprecher, S. (1994). Two sides to the breakup of dating relationships. Personal Relationships, 1, 199-222.

Sternberg, R. J. (1986). A triangular theory of love. Psychological Review, 93, 119-135.

Tabachnick, B. G., & Fidell, L. S. (1989). Using multivariate statistics (2nd ed.). New York: Harper Collins.

Weiss, R. S. (1982). Attachment in adult life. In C. Murray Parkes & J. Stevenson-Hinde (Eds.), The place of attachment in human behavior (pp. 171-184). New York: Basic Books.

Weiss, R. S. (1988). Loss and recovery. Journal of Social Issues, 44, 37-52.

Weiss, R. S. (1991). The attachment bond in childhood and adulthood. In C. M. Parkes, J. Stevenson-Hinde, & P. Morris (Eds.), Attachment across the life cycle (pp. 66-76). London: Routledge.

APPENDIX A

Adult Attachment Styles

a) Hazan and Shaver's Adult Attachment Style Categories

(Hazan & Shaver, 1987, p. 515)

Secure: I find it relatively easy to get close to others and am comfortable depending on them and having them depend on me. I don't often worry about being abandoned or about someone getting too close to me.

Avoidant: I am somewhat uncomfortable with being close to others; I find it difficult to trust them completely, difficult to allow myself to depend on them. I am nervous when anyone gets too close, and often, love partners want me to be more intimate than I feel comfortable being.

Anxious/ambivalent: I find that others are reluctant to get as close as I would like. I often worry that my partner doesn't really love me or won't want to stay with me. I want to merge completely with another person, and this desire sometimes scares people away.

Adult Attachment Styles

b) Bartholomew's Adult Attachment Style Categories

(Bartholomew & Horowitz, 1991, p. 244)

Secure: It is comfortable for me to become emotionally close to others. I am comfortable depending on others and having others depend on me. I don't worry about being alone or having others not accept me.

Dismissing: I am comfortable without close emotional relationships. It is very important to me to feel independent and self-sufficient, and I prefer not to depend on others or have others depend on me.

Preoccupied: I want to be completely emotionally intimate with others, but I often find that others are reluctant to get as close as I would like. I am uncomfortable being without close relationships, but I sometimes worry that others don't value me as much as I value them.

Fearful: I am uncomfortable getting close to others. I want emotionally close relationships, but I find it difficult to trust others completely, or to depend on them. I worry that I will be hurt if I allow myself to become too close to others.

APPENDIX B

FAM 215

CLASS RESEARCH PROJECT

This assignment is worth 20% of your grade in FAM 215. The assignment consists of two parts. Part 1 requires you to have two people complete questionnaires and return them to me or to Aine Humble by **Wednesday, October 12, 1994**. Part 2 requires you to submit a brief report of the results of our study by 4:00 pm, Monday, November 28, 1994. **Late reports will be penalized a full 10% per day.**

DIRECTIONS: PART 1

You have been provided with two copies of the Close Relationships Questionnaire. This contains Bartholomew's measure of current relationship or attachment style, a modification of Bartholomew's measure to assess attachment style during a significant adolescent relationship, Simpson's measure of distress at relationship breakup, Parker's measure of parental bonding, an adaptation of Bartholomew's measure to assess parent-child attachment and some demographic and background questions. You have also been provided with two self addressed envelopes. **You must put your last name and ID number by the return address** so we can monitor who has returned questionnaires. Participants may return envelopes to you to return to Aine Humble or me, or they may return them through campus mail or regular mail.

You are to ask **two** people (preferably **one male** and **one female**) **between the ages of 18 and 25 years (inclusive)** to complete your questionnaires. You can ask friends, acquaintances, co-workers, siblings, other family members, etc. You can ask anyone **except someone currently in FAM 215 or someone who took FAM 215 during 1993.**

Please inform prospective respondents that this is a class research project on relationship styles. Respondents do not have to be in a relationship, nor do they have to have past relationship experiences to participate. **Please tell them that their responses will be completely anonymous and that they are NOT to put their name on the questionnaire.**

Please inform people that, if after looking at the questionnaire they decide that they would rather not participate, they should feel no obligation and are free to withdraw. Should they decide to withdraw, ask them to return the blank questionnaire and envelope to you if possible. For ethical reasons, it is very important that prospective respondents know that their participation is completely voluntary and that they are free to decide not to participate at any time.

DIRECTIONS: PART 2

After you return the questionnaires to Aine or me, Aine will enter the data into a computer file. We will analyze the data and will give you the results back in class. We will discuss our findings and the implications of our results. I will provide you with a brief introduction for your report and you are to add the results and discussion. Your report should be between **6 to 8** pages (excluding the references). **It must be typed and double-spaced with one inch margins.** It can **NOT** be more than 10 pages of text or it will not be marked.

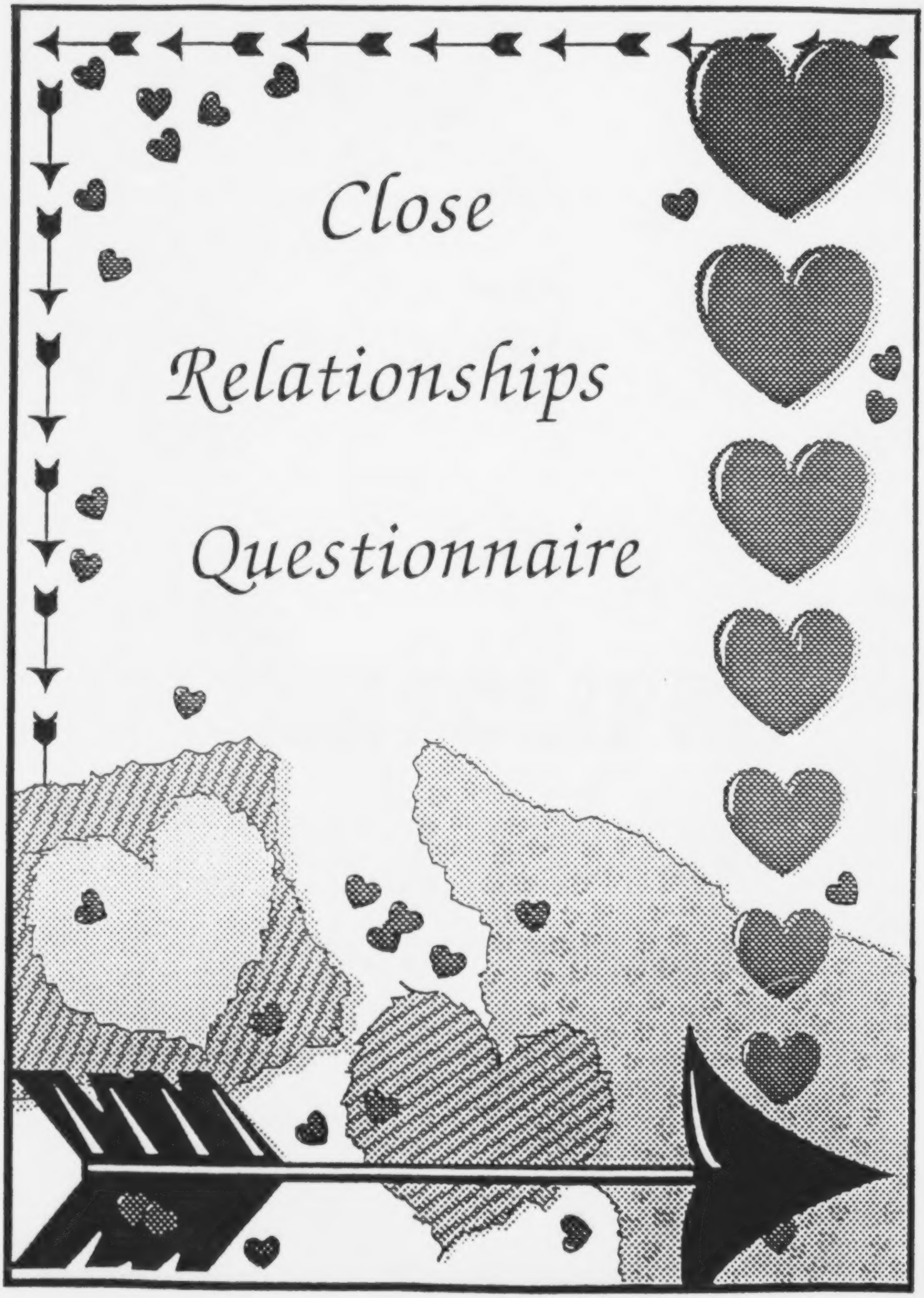
EVALUATION

Part 1 of this class project is optional. For those who participate in Part 1, it is worth 5% of your grade in FAM 215. That is, if you have two individuals complete the class project questionnaires and return them to Aine or me, you will receive a full 5%. For those students who choose to participate in Part 1 of this project, Part 2 (your written report) then will be worth 15%. Parts 1 and 2 of the class research project will be worth a total of 20% toward your course grade.

If you decide not to participate in Part 1 of the class project, the full 20% for this project will be determined by your written report submitted as Part 2.

Please don't forget the deadlines for Parts 1 and 2.

APPENDIX C



Close Relationships Questionnaire

Close Relationships Questionnaire

For a class research project in FAMILY STUDIES 215: RELATIONSHIP DEVELOPMENT at the University of Alberta, we are conducting a study asking people about their romantic relationships. We are interested in finding out about how individuals come to "love" in the particular way that they do. There are five parts to this questionnaire. Part 1 asks about your **relationship style**. Parts 2 and 3 ask about your **romantic relationships in adolescence**. Part 4 asks about your **relationships with your parental caregivers** in childhood. Part 5 asks for some **demographic** or **background** information about you.

If you are 18 to 25 years of age, and are interested in participating in this class research project, please complete the following questionnaire. It will take approximately 20-30 minutes to complete. Do not put your name or any other identifying information on the questionnaire. Your responses will be anonymous. When you have answered all the questions, please put the questionnaire into the envelope provided and seal the envelope. You can return the envelope in one of three ways: (1) return to the student who gave it to you, (2) return through campus mail, or (3) return through regular mail.

PLEASE READ DIRECTIONS IN EACH SECTION CAREFULLY!

PART 1: RELATIONSHIP STYLE

This part of the questionnaire is concerned with your general experiences in adult intimate relationships. Take a moment to think about these experiences and answer the following questions with them in mind.

(1) Following are descriptions of four general relationship styles that people often report. Please read each of the four self-descriptions (A, B, C, and D) and then **place a checkmark** next to the **one** alternative that *best* describes you or is *closest* to the way you generally are in your close romantic relationships. (Note: the terms "close" and "intimate" refer to psychological or emotional closeness, not necessarily to sexual intimacy.)

____ **Style A.** I am comfortable without close emotional relationships. It is very important to me to feel independent and self-sufficient, and I prefer not to depend on love partners or have love partners depend on me.

____ **Style B.** I want to be completely emotionally intimate with love partners, but I often find that love partners are reluctant to get as close as I would like. I am uncomfortable being without close relationships with love partners, and I sometimes worry that love partners don't value me as much as I value them.

____ **Style C.** I am uncomfortable getting close to love partners. I want emotionally close relationships, but I find it difficult to trust love partners completely, or to depend on love partners. I worry that I will be hurt if I allow myself to become too close to love partners.

____ **Style D.** It is easy for me to become emotionally close to love partners. I am comfortable depending on love partners and having love partners depend on me. I don't worry about being alone or having love partners not accept me.

(2) Now please rate **each** of the above styles (A, B, C, and D) according to the *extent* to which you think each description corresponds to your general relationship style, by **circling the appropriate number** for **each** style.

	not at all like me			*somewhat like me*			*very much like me*
style A	1	2	3	4	5	6	7
style B	1	2	3	4	5	6	7
style C	1	2	3	4	5	6	7
style D	1	2	3	4	5	6	7

PART 2:
ADOLESCENT ROMANTIC RELATIONSHIPS

This part of the questionnaire is concerned with your **most significant adolescent romantic relationship** (that is, the relationship that had the most impact on you or affected you the most *when you were 12 to 17 years old*). Take a moment to think about this experience and answer the following questions with this person in mind.

PLEASE LEAVE THIS PAGE BLANK IF YOU DID NOT HAVE A ROMANTIC RELATIONSHIP IN ADOLESCENCE.

(1) Following are descriptions of the four general relationship styles. Please read each of the four self-descriptions (A, B, C, and D) and as you are reading each description, substitute the name of the person with whom you had your most significant adolescent romantic relationship for each _______ (blank). Then **place a checkmark** next to the **one** alternative that *best* describes you or is *closest* to the experiences you had in your **most significant adolescent romantic relationship**.

____ **Style A.** I was comfortable without close emotional relationships. It was very important to me to feel independent and self-sufficient, and I preferred not to depend on _______ or have _______ depend on me.

____ **Style B.** I wanted to be completely emotionally intimate with _______, but I often found that _______ was reluctant to get as close as I would have liked. I was uncomfortable being without a close relationship with _______, and I sometimes worried that _______ didn't value me as much as I valued _______.

____ **Style C.** I was uncomfortable getting close to _______. I wanted emotionally close relationships, but I found it difficult to trust _______ completely, or to depend on _______. I worried that I would be hurt if I allowed myself to become too close to _______.

____ **Style D.** It was easy for me to become emotionally close to _______. I was comfortable depending on _______ and having _______ depend on me. I didn't worry about being alone or having _______ not accept me.

(2) Now please rate **each** of the above styles (A, B, C, and D) according to the *extent* to which you think each description corresponds to the experiences you had in your **most significant adolescent romantic relationship** by **circling the appropriate number** for each style.

	not at all like me			*somewhat like me*			*very much like me*
style A	1	2	3	4	5	6	7
style B	1	2	3	4	5	6	7
style C	1	2	3	4	5	6	7
style D	1	2	3	4	5	6	7

PART 3: ADOLESCENT ROMANTIC RELATIONSHIP BREAKUP

Please continue to think about your adolescent romantic relationship identified in PART 2. This part of the questionnaire is concerned with the **breakup** of your **most significant adolescent romantic relationship**.

**** PLEASE LEAVE THIS PAGE BLANK IF YOU LEFT PART 2 BLANK OR IF YOUR ADOLESCENT ROMANTIC RELATIONSHIP IDENTIFIED IN PART 2 HAS NOT ENDED.***

Take a moment to think about how your most significant adolescent romantic relationship (identified in PART 2) ended, and answer the following questions with it in mind by **circling the appropriate number**.

1. Immediately after the breakup, how difficult was it for you to make an emotional adjustment?

not at all						*a great deal/ extremely*
1	2	3	4	5	6	7

2. Immediately after the breakup occurred, to what extent did it disrupt your typical, everyday functioning and routine?

not at all						*a great deal/ extremely*
1	2	3	4	5	6	7

3. How upset were you immediately after the breakup?

not at all						*a great deal/ extremely*
1	2	3	4	5	6	7

4. How long did it take you to make an emotional adjustment after the breakup?

no time at all							*more than two months*
1	2	3	4	5	6	7	8

5. How long were you upset after the breakup?

no time at all							*more than two months*
1	2	3	4	5	6	7	8

6. How long did the breakup disrupt your typical, everyday functioning and routine?

no time at all							*more than two months*
1	2	3	4	5	6	7	8

7. Who initiated the breakup (**check one**)?
____ your partner ____ you ____ both you and your partner (mutually)

8. What was the duration of this relationship (**fill in blanks with numbers**)?
____ years ____ months or ____ weeks

9. What age were you when this relationship ended (**fill in blanks with numbers**)?
____ years ____ months

PART 4:
CHILDHOOD RELATIONSHIPS

Section A: Father

This part of the questionnaire is concerned with your childhood relationship with your **father** (or father-substitute) during the first 16 years of your life.

IF YOU DO NOT REMEMBER OR DID NOT GET TO KNOW YOUR FATHER DURING CHILDHOOD BECAUSE OF DEATH OR SEPARATION/DIVORCE, AND THERE WAS NO ONE SPECIAL WHO SERVED AS A SUBSTITUTE FOR YOUR MISSING FATHER, PLEASE LEAVE THIS SECTION BLANK.

This section lists various attitudes and behaviors of parents. Take a moment to think about your **father** (or father-substitute) during your first 16 years. Then respond to the following statements by **circling the appropriate number** according to how much the statement describes your **father's** (or father-substitute's) style of caregiving during those years.

For each statement:
1= **Very like** my father
2= **Moderately like** my father
3= **Moderately unlike** my father
4= **Very unlike** my father

MY FATHER...	Very like	Moderately like	Moderately unlike	Very unlike
1. Spoke to me with a warm and friendly voice.	1	2	3	4
2. Did not help me as much as I needed.	1	2	3	4
3. Let me do those things I liked doing.	1	2	3	4
4. Seemed emotionally cold to me.	1	2	3	4
5. Appeared to understand my problems and worries.	1	2	3	4
6. Was affectionate to me.	1	2	3	4
7. Liked me to make my own decisions.	1	2	3	4
8. Did not want me to grow up.	1	2	3	4
9. Tried to control everything I did.	1	2	3	4
10. Invaded my privacy.	1	2	3	4
11. Enjoyed talking things over with me.	1	2	3	4
12. Frequently smiled at me.	1	2	3	4

		Very like	Moderately like	Moderately unlike	Very unlike
13.	Tended to baby me.	1	2	3	4
14.	Did not seem to understand what I needed or wanted.	1	2	3	4
15.	Let me decide things for myself.	1	2	3	4
16.	Made me feel I wasn't wanted.	1	2	3	4
17.	Could make me feel better when I was upset.	1	2	3	4
18.	Did not talk with me very much.	1	2	3	4
19.	Tried to make me feel dependent on him.	1	2	3	4
20.	Felt I could not look after myself unless he was around.	1	2	3	4
21.	Gave me as much freedom as I wanted.	1	2	3	4
22.	Let me go out as much as I wanted.	1	2	3	4
23.	Was overprotective of me.	1	2	3	4
24.	Did not praise me.	1	2	3	4
25.	Let me dress in any way I pleased.	1	2	3	4

Section A: Mother

This part of the questionnaire is concerned with your childhood relationship with your **mother** (or mother-substitute) during the first 16 years of your life.

**** IF YOU DO NOT REMEMBER OR DID NOT GET TO KNOW YOUR MOTHER DURING CHILDHOOD BECAUSE OF DEATH OR SEPARATION/DIVORCE, AND THERE WAS NO ONE SPECIAL WHO SERVED AS A SUBSTITUTE FOR YOUR MISSING MOTHER, PLEASE LEAVE THIS SECTION BLANK.***

This section lists various attitudes and behaviors of parents. Take a moment to think about your **mother** (or mother-substitute) during your first 16 years. Then respond to the following statements by **circling the appropriate number** according to how much the statement describes your **mother's** (or mother-substitute's) style of caregiving during those years.

For each statement:
1= **Very like** my mother
2= **Moderately like** my mother
3= **Moderately unlike** my mother
4= **Very unlike** my mother

MY MOTHER...	Very like	Moderately like	Moderately unlike	Very unlike
1. Spoke to me with a warm and friendly voice.	1	2	3	4
2. Did not help me as much as I needed.	1	2	3	4
3. Let me do those things I liked doing.	1	2	3	4
4. Seemed emotionally cold to me.	1	2	3	4
5. Appeared to understand my problems and worries.	1	2	3	4
6. Was affectionate to me.	1	2	3	4
7. Liked me to make my own decisions.	1	2	3	4
8. Did not want me to grow up.	1	2	3	4
9. Tried to control everything I did.	1	2	3	4
10. Invaded my privacy.	1	2	3	4
11. Enjoyed talking things over with me.	1	2	3	4
12. Frequently smiled at me.	1	2	3	4
13. Tended to baby me.	1	2	3	4
14. Did not seem to understand what I needed or wanted.	1	2	3	4

		Very like	Moderately like	Moderately unlike	Very unlike
15.	Let me decide things for myself.	1	2	3	4
16.	Made me feel I wasn't wanted.	1	2	3	4
17.	Could make me feel better when I was upset.	1	2	3	4
18.	Did not talk with me very much.	1	2	3	4
19.	Tried to make me feel dependent on her.	1	2	3	4
20.	Felt I could not look after myself unless she was around.	1	2	3	4
21.	Gave me as much freedom as I wanted.	1	2	3	4
22.	Let me go out as much as I wanted.	1	2	3	4
23.	Was overprotective of me.	1	2	3	4
24.	Did not praise me.	1	2	3	4
25.	Let me dress in any way I pleased.	1	2	3	4

Section B: Father

(1) Following are descriptions of four general parental caregiving styles. Please read each of the descriptions (A, B, C, and D) and then **place a checkmark** next to the **one** alternative that *best* describes or is *closest* to your **father's** (or father-substitute's) style of caregiving during your childhood.

IF YOU DO NOT REMEMBER OR DID NOT GET TO KNOW YOUR FATHER DURING CHILDHOOD BECAUSE OF DEATH OR SEPARATION/DIVORCE, AND THERE WAS NO ONE SPECIAL WHO SERVED AS A SUBSTITUTE FOR YOUR MISSING FATHER, PLEASE LEAVE THIS PAGE BLANK.

FATHER:

____ **Style A.** My father was fairly cold and distant, or rejecting, not very responsive; he expressed hostility and anger in front of me at times; he was sometimes overly harsh and critical; I wasn't his highest priority; his concerns were often elsewhere; it's possible that he would just as soon not have had me.

____ **Style B.** My father was noticeably inconsistent in his reactions to me, sometimes warm and sometimes not; he was overprotective at times; he had his own agendas which sometimes got in the way of his receptiveness to my needs; he definitely loved me but didn't always show it in the best way.

____ **Style C.** My father was fairly cold and distant; not very responsive or sensitive to my needs; he emphasized achievement and independence (ie. in school, sports, etc.) above everything else; I sometimes got the feeling that he was trying to "live through me" (ie. get me to accomplish all the things that he was unable to accomplish).

____ **Style D.** My father was generally warm and responsive; he was good at knowing when to be supportive and when to let me operate on my own; our relationship was almost always comfortable, and I have no major reservations or complaints about it.

(2) Now please rate **each** of the above descriptions (A, B, C, and D) according to the *extent* to which you think the description corresponds to your **father's** (or father-substitute's) style of caregiving during your childhood by **circling the appropriate number**.

	not at all like my father			*somewhat like my father*			*very much like my father*
style A	1	2	3	4	5	6	7
style B	1	2	3	4	5	6	7
style C	1	2	3	4	5	6	7
style D	1	2	3	4	5	6	7

Section B: Mother

(1) Following are descriptions of four general parental caregiving styles. Please read each of the four descriptions (A, B, C, and D) and then **place a checkmark** next to the **one** alternative that *best* describes or is *closest* to your **mother's** (or mother-substitute's) style of caregiving during your childhood.

• IF YOU DO NOT REMEMBER OR DID NOT GET TO KNOW YOUR MOTHER DURING CHILDHOOD BECAUSE OF DEATH OR SEPARATION/DIVORCE, AND THERE WAS NO ONE SPECIAL WHO SERVED AS A SUBSTITUTE FOR YOUR MISSING MOTHER, PLEASE LEAVE THIS PAGE BLANK.

MOTHER:

____ **Style A.** My mother was fairly cold and distant, or rejecting, not very responsive; she expressed hostility and anger in front of me at times; she was sometimes overly harsh and critical; I wasn't her highest priority; her concerns were often elsewhere; it's possible that she would just as soon not have had me.

____ **Style B.** My mother was noticeably inconsistent in her reactions to me, sometimes warm and sometimes not; she was overprotective at times; she had her own agendas which sometimes got in the way of her receptiveness to my needs; she definitely loved me but didn't always show it in the best way.

____ **Style C.** My mother was fairly cold and distant; not very responsive or sensitive to my needs; she emphasized achievement and independence (ie. in school, sports, etc.) above everything else; I sometimes got the feeling that she was trying to "live through me" (ie. get me to accomplish all the things that she was unable to accomplish).

____ **Style D.** My mother was generally warm and responsive; she was good at knowing when to be supportive and when to let me operate on my own; our relationship was almost always comfortable, and I have no major reservations or complaints about it.

(2) Now please rate **each** of the above descriptions (A, B, C, and D) according to the *extent* to which you think the description corresponds to your **mother's** (or mother-substitute's) style of caregiving during your childhood by **circling the appropriate** number.

	not at all like my mother			*somewhat like my mother*			*very much like my mother*
style A	1	2	3	4	5	6	7
style B	1	2	3	4	5	6	7
style C	1	2	3	4	5	6	7
style D	1	2	3	4	5	6	7

PART 5: DEMOGRAPHIC INFORMATION

1. Sex: ____ female ____ male **2.** Age: ____ years old

3. What is your current relationship status (**check one**)?
____ married
____ seeing one person exclusively
____ seeing more than one person
____ not seeing anyone but looking
____ not seeing anyone and not looking
____ other (please specify) ________________________________

4. Have you ever been divorced? ____ yes ____ no

5. Would you consider yourself primarily (**check one**):
____ heterosexual
____ bisexual
____ lesbian/gay

6. To what extent do you think your current ideas about love have been influenced by your own experiences in intimate relationships (**circle the appropriate number**)?

not at all	*somewhat*	*moderately*	*very*	*extremely*
1	2	3	4	5

7. How old were you when you had your first significant adolescent romantic relationship (**fill in blank(s) with number(s)**)?
____ years ____ months

8. What was the duration of your longest adolescent romantic relationship (**fill in blank(s) with number(s)**)?
____ years ____ months **or** ____ weeks

9. How many times have you been in a serious love relationship (including any current relationship) (**fill in blank with number**)? ____ time(s)

10. How many times have you been "in love" without the other person feeling the same way (**fill in blank with number**)? ____ time(s)

11. How many times have you had your "heart broken" or really been hurt in a relationship (**fill in blank with number**)?
____ time(s)

12. How many times have you been aware that someone was "in love" with you but you did not feel the same way about her or him (**fill in blank with number**)?
____ time(s)

13. How many times have you "broken someone's heart" or hurt them in a relationship (**fill in blank with number**)?
____ time(s)

14. If you are currently involved in a relationship, how long have you been involved with this person (**fill in blank(s) with number(s)**)?
____ years ____ months **or** ____ weeks

THANK YOU VERY MUCH
FOR PARTICIPATING
IN THIS STUDY!

If after completing this questionnaire you have any questions regarding this class research project, you may call (1) Aine Humble (492-5303), (2) Dr. Berna Skrypnek (492-0192), or (3) contact the student who gave you this questionnaire.

OR if you have any questions about current or previous relationships that you would like to explore further with a professional, you may wish to call one of the following places:

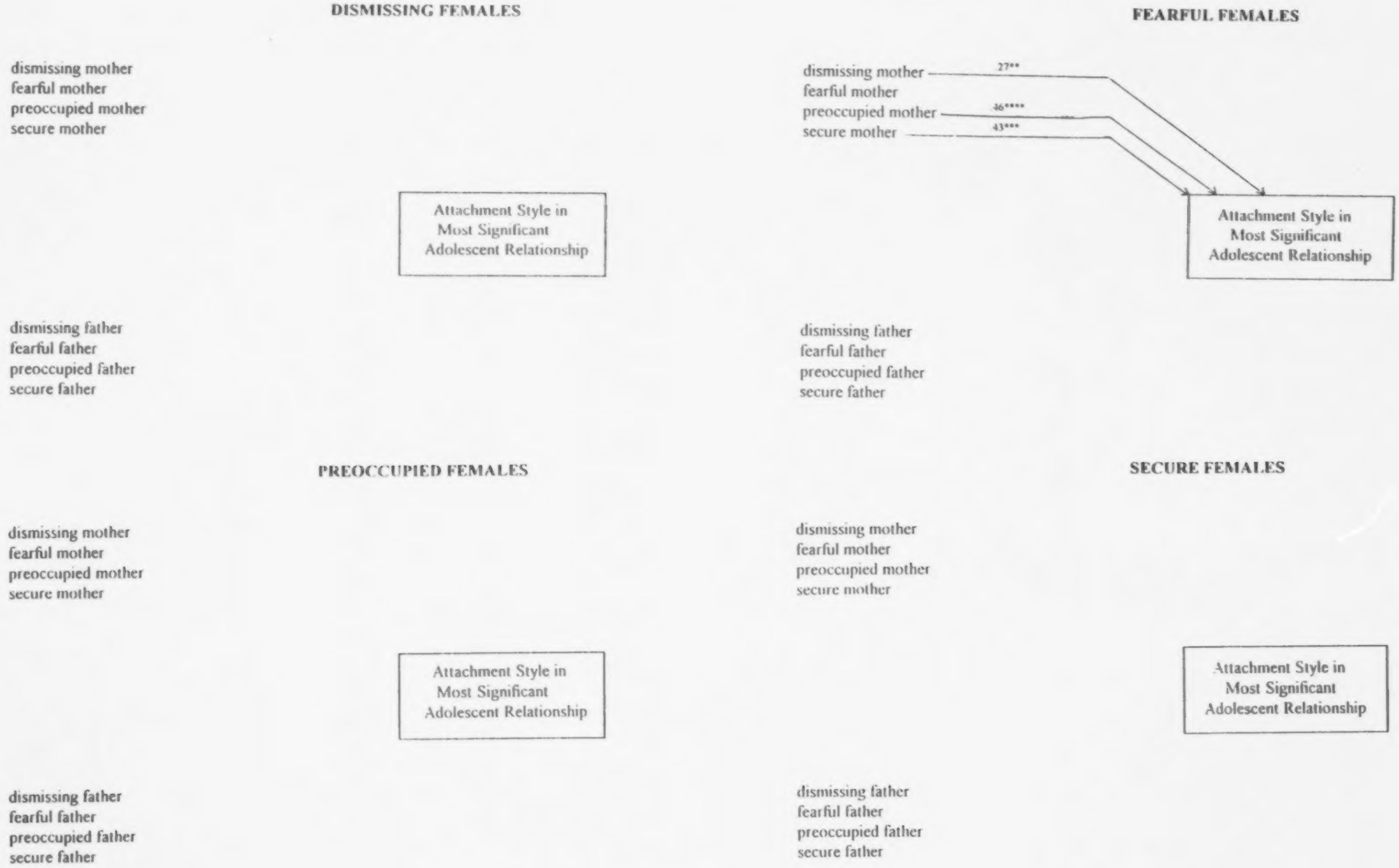
(1) ***Student Counselling Services*** 492-5205
  (service is free of charge for University of Alberta students)
  -individual/couple counselling and group workshops on developing healthy relationships
(2) ***Dr. Carroll Ganam*** (chartered psychologist), ***Lousage Institute*** 488-7679
(3) ***Dr. Colleen MacDougall*** (chartered psychologist) 482-7515
  (fees negotiable)
(4) ***Catholic Social Services*** 432-1137
  (fees based on "sliding scale")
  -individual/couple counselling and various group workshops

PLEASE TEAR OFF THIS SHEET AND RETAIN FOR YOUR REFERENCE

APPENDIX D

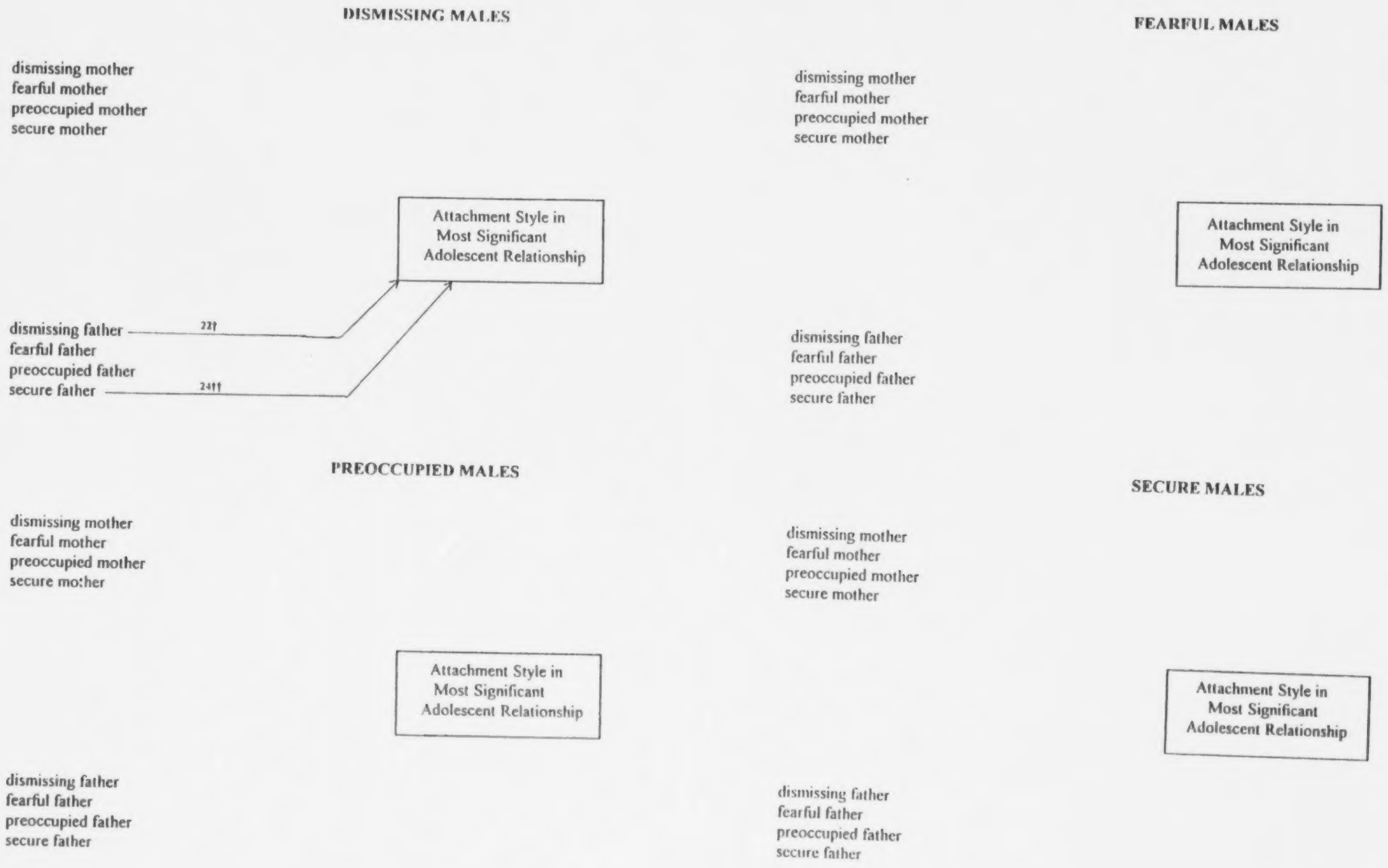
Betas for Individual Predictors in Significant Regression Analyses

Standardized Regression Coefficients (Betas) for Prediction of Females' Adolescent Attachment Scale Scores


DISMISSING FEMALES
dismissing mother
fearful mother
preoccupied mother
secure mother
Attachment Style in Most Significant Adolescent Relationship
dismissing father
fearful father
preoccupied father
secure father
FEARFUL FEMALES
dismissing mother
27**
fearful mother
preoccupied mother
46****
secure mother
43***
Attachment Style in Most Significant Adolescent Relationship
dismissing father
fearful father
preoccupied father
secure father
PREOCCUPIED FEMALES
dismissing mother
fearful mother
preoccupied mother
secure mother
Attachment Style in Most Significant Adolescent Relationship
dismissing father
fearful father
preoccupied father
secure father
SECURE FEMALES
dismissing mother
fearful mother
preoccupied mother
secure mother
Attachment Style in Most Significant Adolescent Relationship
dismissing father
fearful father
preoccupied father
secure father

**p< 01, ***p< 005, ****p< 001

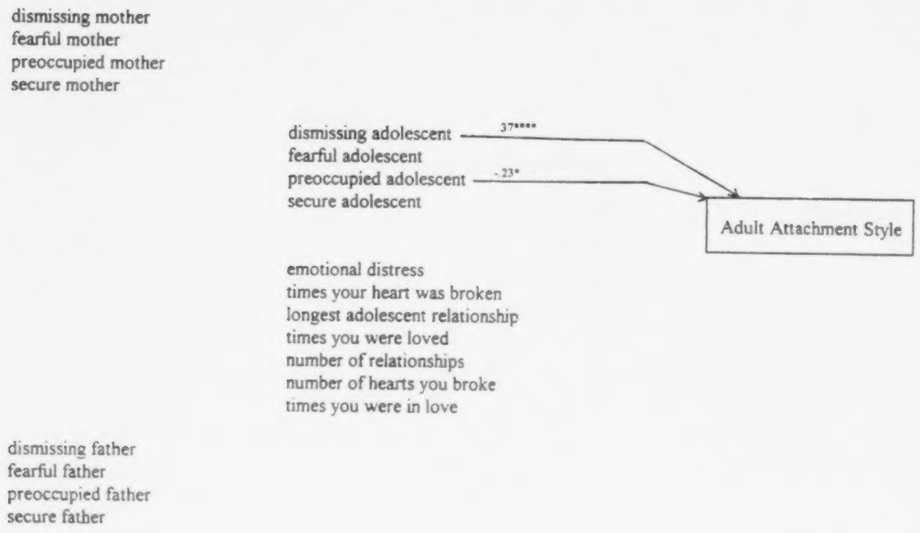
Standardized Regression Coefficients (Betas) for Prediction of Males' Adolescent Attachment Scale Scores


DISMISSING MALES
dismissing mother
fearful mother
preoccupied mother
secure mother
Attachment Style in Most Significant Adolescent Relationship
dismissing father
22†
fearful father
preoccupied father
secure father
24††
FEARFUL MALES
dismissing mother
fearful mother
preoccupied mother
secure mother
Attachment Style in Most Significant Adolescent Relationship
dismissing father
fearful father
preoccupied father
secure father
PREOCCUPIED MALES
dismissing mother
fearful mother
preoccupied mother
secure mother
Attachment Style in Most Significant Adolescent Relationship
dismissing father
fearful father
preoccupied father
secure father
SECURE MALES
dismissing mother
fearful mother
preoccupied mother
secure mother
Attachment Style in Most Significant Adolescent Relationship
dismissing father
fearful father
preoccupied father
secure father

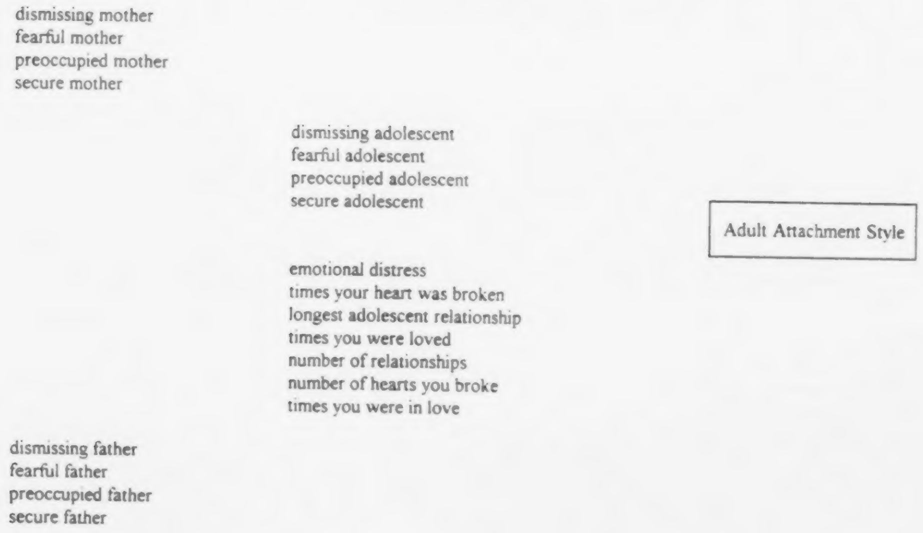
††p_ 10, †p< 10

Standardized Regression Coefficients (Betas) for Prediction of Females' Adult Attachment Scale Scores

DISMISSING FEMALES

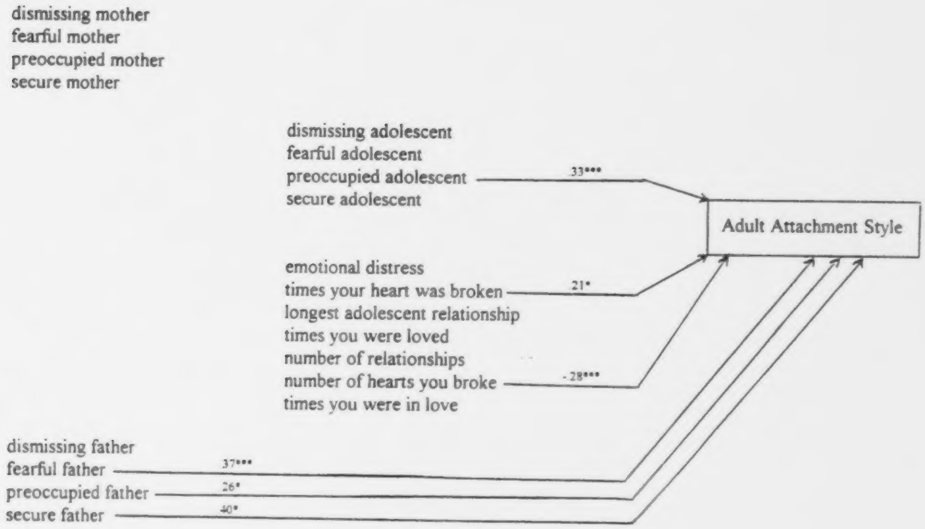

dismissing mother
fearful mother
preoccupied mother
secure mother
dismissing adolescent
37****
fearful adolescent
preoccupied adolescent
-.23*
secure adolescent
Adult Attachment Style
emotional distress
times your heart was broken
longest adolescent relationship
times you were loved
number of relationships
number of hearts you broke
times you were in love
dismissing father
fearful father
preoccupied father
secure father

FEARFUL FEMALES

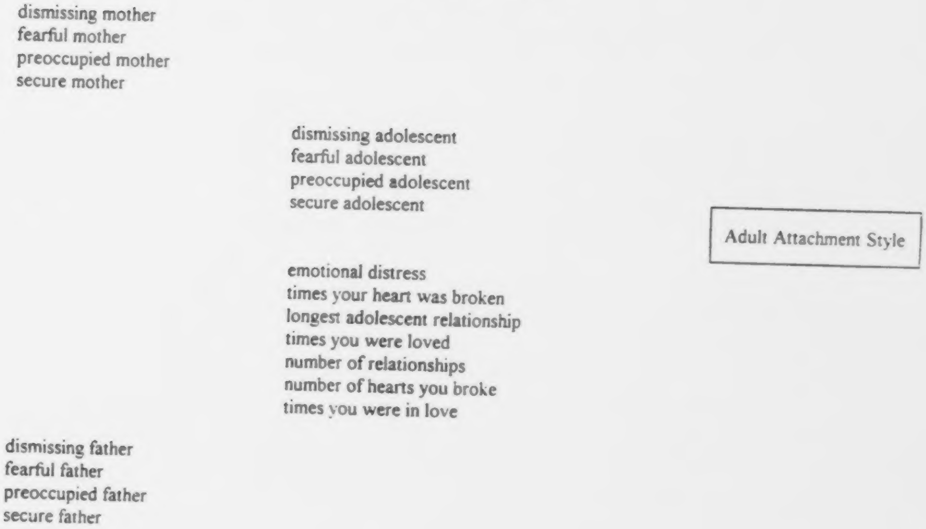

dismissing mother
fearful mother
preoccupied mother
secure mother
dismissing adolescent
fearful adolescent
preoccupied adolescent
secure adolescent
Adult Attachment Style
emotional distress
times your heart was broken
longest adolescent relationship
times you were loved
number of relationships
number of hearts you broke
times you were in love
dismissing father
fearful father
preoccupied father
secure father

*p<.05, ****p<.001

PREOCCUPIED FEMALES


dismissing mother
fearful mother
preoccupied mother
secure mother
dismissing adolescent
fearful adolescent
preoccupied adolescent
33***
secure adolescent
Adult Attachment Style
emotional distress
times your heart was broken
21*
longest adolescent relationship
times you were loved
number of relationships
number of hearts you broke
-28***
times you were in love
dismissing father
fearful father
37***
preoccupied father
26*
secure father
40*

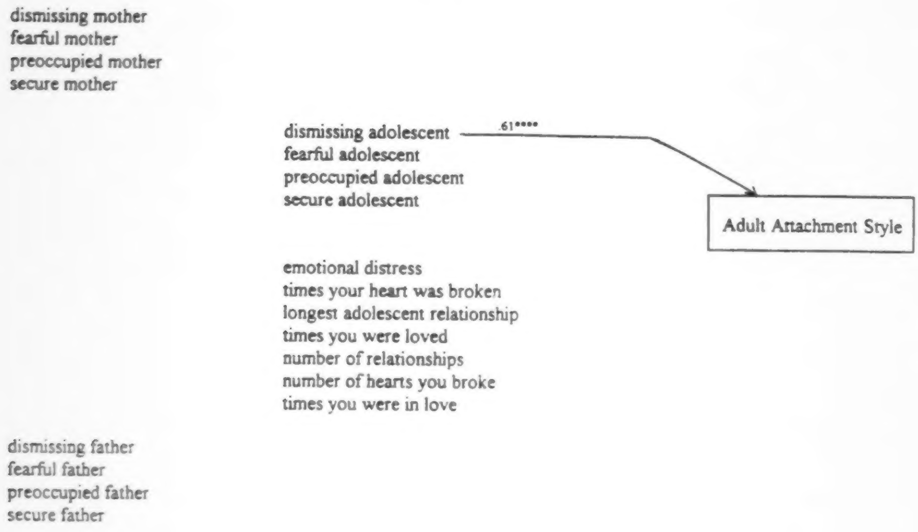
SECURE FEMALES


dismissing mother
fearful mother
preoccupied mother
secure mother
dismissing adolescent
fearful adolescent
preoccupied adolescent
secure adolescent
Adult Attachment Style
emotional distress
times your heart was broken
longest adolescent relationship
times you were loved
number of relationships
number of hearts you broke
times you were in love
dismissing father
fearful father
preoccupied father
secure father

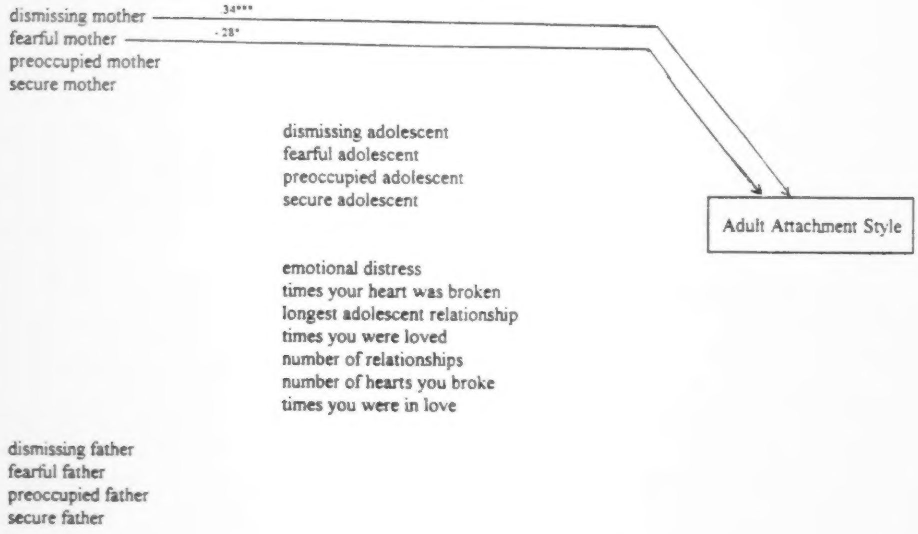
*p<.05, ***p<.005

Standardized Regression Coefficients (Betas) for Prediction of Males' Adult Attachment Scale Scores

DISMISSING MALES

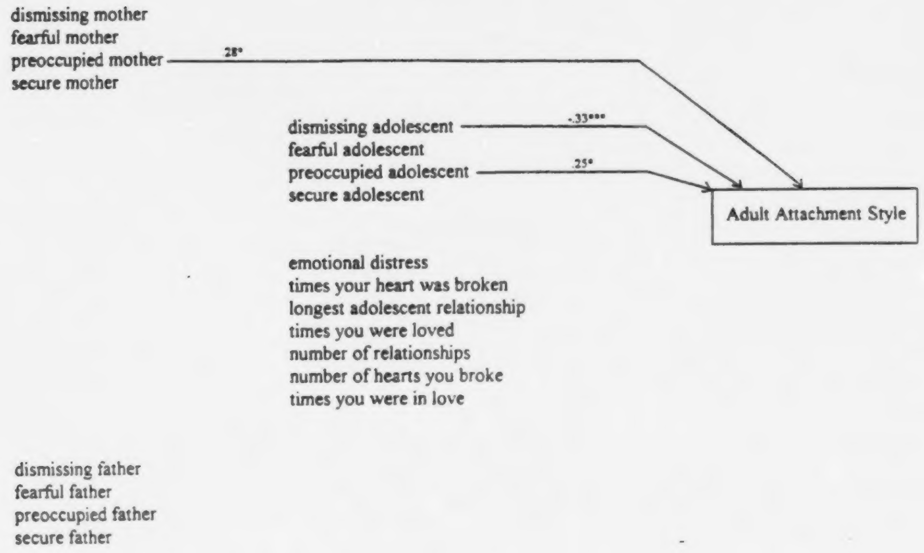

dismissing mother
fearful mother
preoccupied mother
secure mother
dismissing adolescent
.61****
fearful adolescent
preoccupied adolescent
secure adolescent
Adult Attachment Style
emotional distress
times your heart was broken
longest adolescent relationship
times you were loved
number of relationships
number of hearts you broke
times you were in love
dismissing father
fearful father
preoccupied father
secure father

FEARFUL MALES

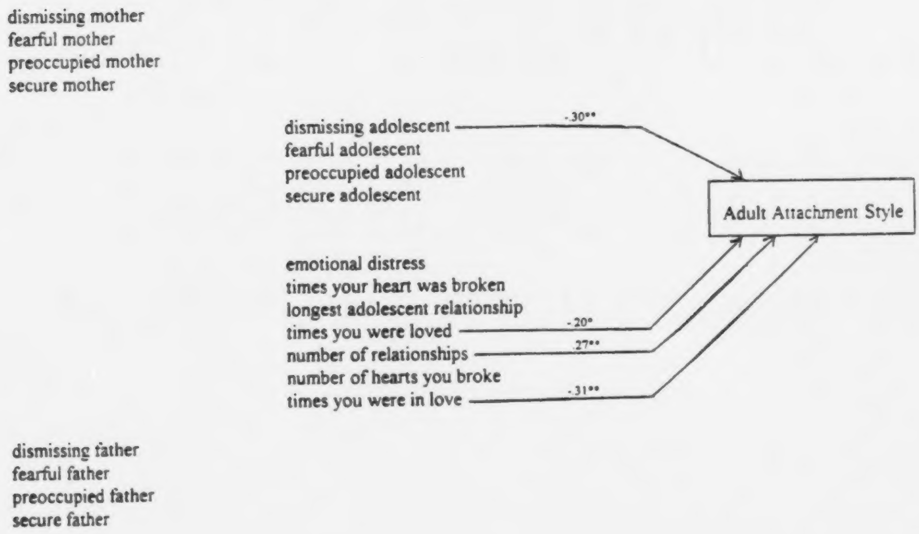

dismissing mother
.34***
fearful mother
-.28*
preoccupied mother
secure mother
dismissing adolescent
fearful adolescent
preoccupied adolescent
secure adolescent
Adult Attachment Style
emotional distress
times your heart was broken
longest adolescent relationship
times you were loved
number of relationships
number of hearts you broke
times you were in love
dismissing father
fearful father
preoccupied father
secure father

*$p < .05$, ***$p < .005$, ****$p < .001$

PREOCCUPIED MALES


dismissing mother
fearful mother
preoccupied mother
28*
secure mother
dismissing adolescent
-.33***
fearful adolescent
preoccupied adolescent
.25*
secure adolescent
Adult Attachment Style
emotional distress
times your heart was broken
longest adolescent relationship
times you were loved
number of relationships
number of hearts you broke
times you were in love
dismissing father
fearful father
preoccupied father
secure father

SECURE MALES


dismissing mother
fearful mother
preoccupied mother
secure mother
dismissing adolescent
-.30**
fearful adolescent
preoccupied adolescent
secure adolescent
Adult Attachment Style
emotional distress
times your heart was broken
longest adolescent relationship
times you were loved
-.20*
number of relationships
.27**
number of hearts you broke
times you were in love
-.31**
dismissing father
fearful father
preoccupied father
secure father

*p<.05. **p<.01***, p<.005.

APPENDIX E

Regression Analyses Using the Parental Bonding Instrument

In addition to a set of regression analyses using the parent-child attachment as a measure of attachment during childhood, a second set of regression analyses was conducted using the Parental Bonding Instrument as the measure of attachment during childhood. Each of the two regression analyses was performed eight times: once for each of the four attachment scales and separately for each sex. The regression analyses were:

1. Model 1: mother-child parental bonding instrument (PBI) and father-child PBI (predictor variables) on adolescent attachment style (dependent variable).
2. Model 2: mother-child PBI, father-child PBI, adolescent attachment styles, and relationship history experiences (predictor variables) on adult attachment style (dependent variable).

Predictor variables were entered in the following order: (1) scores on the dimensions of care and overprotection from the mother-child PBI, (2) scores on the dimensions of care and overprotection from the father-child PBI, (3) scores on adolescent attachment scales, and (4) emotional distress (following the ending of the individual's most significant adolescent romantic relationship) and relationship history experiences (number of times respondent's heart was broken, duration of respondent's longest adolescent romantic relationship, number of individuals that loved respondent, number of romantic relationships, number of times respondent broke other people's hearts, and number of people respondent loved). An alpha level of .05 was used for all statistical tests.

Predicting Adolescent Attachment Scale Scores From Parent Attachment

It was hypothesized that parent-child attachment would predict attachment styles identified for the most significant adolescent romantic relationships. To test this part of the causal model (see Figure 2 on p. 53), four hierarchical regression analyses were conducted. Scores on the two PBI dimensions of care and overprotection for mothers were entered as the first block of predictor variables and scores on the two PBI dimensions of care and overprotection for fathers were entered as the second block of predictor variables. Ratings on each of the adolescent attachment style scales were the dependent variables. The analysis was performed once for females and once for males, resulting in eight regression analyses total.

Predicting Adolescent Dismissing Attachment Scale Scores

Regression results were non-significant for females, $\underline{F} < 1$, and for males, $\underline{F}(4, 119) = 1.52$, ns. Parent-child PBI dimensions did not reliably predict scores on the adolescent dismissing attachment scale.

Predicting Adolescent Fearful Attachment Scale Scores

Regression results were non-significant for females, $\underline{F}(4, 138) = 1.11$, ns, and for males, $\underline{F} < 1$. Parent-child PBI dimensions did not reliably predict scores on the adolescent fearful attachment scale.

Predicting Adolescent Preoccupied Attachment Scale Scores

Regression results were non-significant for females, $F < 1$, and for males, $\underline{F}(4, 119) = 2.24$, ns. Parent-child PBI dimensions did not reliably predict scores on the adolescent preoccupied attachment scale.

Predicting Adolescent Secure Attachment Scale Scores

Regression results were non-significant for females, $\underline{F} < 1$, and for males, $\underline{F} < 1$. Parent-child PBI dimensions did not reliably predict scores on the adolescent secure attachment scale.

Summary of Results From First Regression Analysis

Using the Parental Bonding Instrument (PBI), no support was found for the hypothesis that attachment with parents would predict adolescent attachment styles, or that the opposite-sex parent would have a greater influence on adolescents' attachment styles than would the same-sex parent

Predicting Adult Attachment Scale Scores From Parent-Child Attachment, Adolescent Attachment, and Romantic Relationship Experiences

It was hypothesized that parent-child attachment, adolescent attachment, and related romantic experiences would predict current adult attachment. To test this part of the causal model (see Figure 4 on p. 59), four hierarchical regression analyses were conducted. Scores on the two PBI dimensions of care and overprotection for mothers were entered as predictors in the first block; scores on the two PBI dimensions of care and overprotection for fathers were entered in the second block; adolescent attachment scale scores were entered in the third block; relationship history variables were entered in the fourth and final block. Ratings of each of the current attachment style scales were the dependent variables. Analyses were conducted separately for females and males, resulting in eight regression analyses total.

Predicting Adult Dismissing Attachment Scale Scores

When analyzed for females, 22% of the total variance of adult dismissing attachment scale scores was accounted for by the predictor variables, $\underline{F}(15, 111) = 2.03$, $\underline{p} < .05$. Mother-child attachment entered at Step 1 accounted for no variance; father-child attachment entered at Step 2 also accounted for no variance; adolescent attachment entered at Step 3 accounted for 17%; and relationship history variables entered at Step 4 accounted for a further 5%. Adolescent dismissing and adolescent preoccupied were the significant individual predictor variables for females' adult dismissing scales (see Table 16). Females who scored higher on the adolescent dismissing scale were also likely to rate themselves higher on the current dismissing scale whereas those females who scored higher on the adolescent preoccupied scale were less likely to score higher on the current dismissing scale.

Results were also significant for males, with predictor variables accounting for 42% of the variance, $\underline{F}(15, 95) = 4.67$, $\underline{p} < .001$. Mother-child attachment scale scores entered at Step 1 accounted for 6% of variance; father-child attachment scale scores entered at Step 2 did not add to the prediction; adolescent attachment scale scores entered at Step 3 accounted for 31%; and relationship history variables entered at Step 4 accounted for a final 5% of the variance. Two significant individual predictor variables emerged (see Table 16). First, scores on overprotection for mothers were negatively related to having a dismissing attachment style in adolescence. Second, males who rated themselves highly on the adolescent dismissing scale were also likely to rate themselves highly on the current dismissing scale.

Table 16

Standardized Regression Coefficients (Betas) for Predictors of Adult Dismissing Attachment Scale Scores (Using the PBI)

Predictor Variables	Females (n = 127)	Males (n = 111)
Step 1		
caring mother	.00	-.09
overprotective mother	-.07	-.23*
Step 2		
caring father	.00	-.04
overprotective father	-.04	.15
Step 3		
dismissing adolescent	.37****	.56****
fearful adolescent	-.02	.01
preoccupied adolescent	-.22*	-.11
secure adolescent	-.04	.03
Step 4		
emotional distress	.15	.06
times your heart broken	-.06	-.09
longest adol relationship	.05	-.02
times you were loved	.06	.16
number of relationships	.02	-.17
number of hearts you broke	.05	-.05
times you were in love	.14	.04

Note. Reported betas are from the final regression model.
*$p \leq .05$. ****$p < .001$.

Predicting Adult Fearful Attachment Scale Scores

Analysis for females revealed that their scores on the adult fearful attachment scale could not be reliably predicted, F(15, 111) = 1.31, ns. On the other hand, the regression equation was significant for males, F(15, 95) = 2.06, $p < .05$, and accounted for 25% of the total variance of males' adult fearful attachment scale scores. Mother-child attachment scale scores entered at Step 1 accounted for no variance; father-child attachment scale scores entered at Step 2 accounted for 4%; adolescent attachment scale scores entered at Step 3 accounted for 12%; and relationship history variables entered at Step 4 accounted for a final 9%. Rating fathers highly on overprotection dimension was positively related to scoring highly on the current fearful scale. Additionally, males who rated themselves highly on the adolescent dismissing scale and the fearful scale were also likely to rate themselves highly on the current fearful scale (see Table 17).

These findings were different in two ways from the regression analysis for males' fearful scale scores using the previous measures of parent-child attachment. First, the previous regression found that mother-child attachment accounted for a significant amount of variance whereas this regression did not any effect for mothers. Second, this regression found that adolescent attachment accounted for a higher percent of variance than relationship history, whereas the first regression analysis found the opposite pattern (relationship history accounted for more variance than adolescent attachment style).

Table 17

Standardized Regression Coefficients (Betas) for Predictors of Adult Fearful Attachment Scale Scores (Using the PBI)

Predictor Variables	Females (n = 127)	Males (n = 111)
Step 1		
caring mother	-.07	-.04
overprotective mother	.00	-.17
Step 2		
caring father	-.04	.15
overprotective father	.06	.29*
Step 3		
dismissing adolescent	-.01	.22*
fearful adolescent	.12	.26*
preoccupied adolescent	-.21	.05
secure adolescent	-.04	.01
Step 4		
emotional distress	.13	.19
times your heart broken	.27**	.04
longest adol relationship	.05	.05
times you were loved	.05	.14
number of relationships	-.09	-.17
number of hearts you broke	.05	-.07
times you were in love	-.01	.15

Note. Reported betas are from the final regression model.
*$p < .05$. **$p < .01$.

Predicting Adult Preoccupied Attachment Scale Scores

When analyzed for females, 27% of the total variance of adult preoccupied attachment scale scores was accounted for by the predictor variables, $\underline{F}(15, 111) = 2.66$, $\underline{p} < .005$. Mother-child attachment scale scores entered at Step 1 accounted for only 1% of variance; father-child attachment scale scores entered at Step 2 accounted for only 1%; adolescent attachment scale scores entered at Step 3 accounted for 14%; and relationship history variables entered at Step 4 accounted for a final 11%. Females that rated themselves highly on the adolescent preoccupied scale also rated themselves highly on the adult preoccupied scale. As expected, the number of people whose hearts the respondent broke was negatively related to having a current preoccupied style for females, and females who rated themselves higher on the preoccupied scale were less likely to break many individuals' hearts. Table 18 lists the predictor variables' standardized beta coefficients.

When analyzed for males, 38% of the total variance of adult preoccupied attachment scale scores was accounted for by the predictor variables, $\underline{F}(15, 95) = 3.11$, $\underline{p} < .001$. Mother-child attachment scale scores entered at Step 1 accounted for 7% of variance; father-child attachment scale scores entered at Step 2 accounted for 2%; adolescent attachment scale scores entered at Step 3 accounted for 17%; and relationship history variables entered at Step 4 accounted for a further 8% of the variance. Similar to the first set of regression analyses using the other measure of parent-child attachment, a different pattern of individual predictor variables emerged for males. Parents did have an effect, and it was attachment with mothers (the opposite-sex parent) that had the main impact on males' preoccupied adolescent attachment styles. Males who reported mothers who were high in overprotection also reported high scores on the adolescent preoccupied scales. As expected, also rating the self higher on the adolescent preoccupied scale was positively related to scoring higher on the preoccupied scale for males (see Table 18).

Table 18

Standardized Regression Coefficients (Betas) for Predictors of Adult Preoccupied Attachment Scale Scores (Using the PBI)

Predictor Variables	Females (n = 126)	Males (n = 111)
Step 1		
caring mother	-.01	.03
overprotective mother	-.17	.26*
Step 2		
caring father	.00	.12
overprotective father	.07	-.04
Step 3		
dismissing adolescent	.07	-.11
fearful adolescent	-.04	.14
preoccupied adolescent	.32***	.32***
secure adolescent	.05	.11
Step 4		
emotional distress	-.01	-.05
times your heart broken	.24*	.14
longest adol relationship	-.02	.17
times you were loved	.09	-.06
number of relationships	.09	-.04
number of hearts you broke	-.29***	-.16
times you were in love	-.10	.07

Note. Reported betas are from the final regression model.
*$p < .05$. ***$p < .005$.

Predicting Adult Secure Attachment Scale Scores

The regression equation was not significant for females, $\underline{F} < 1$. However, results were significant again for males, $\underline{F}(15, 95) = 2.55$, $\underline{p} < .005$, with all the predictor variables accounting for 29% of the variance. Mother-child attachment scale scores entered at Step 1 accounted for 2% of the variance; father-child attachment scale scores entered at Step 2 accounted for 2%; adolescent attachment scale scores entered at Step 3 accounted for 5%; and relationship history variables entered at Step 4 accounted for the most variance at 20%. Interestingly, reporting mothers who were high in overprotection and having a higher number of romantic relationships were related to having higher scores on the secure scale for males. Furthermore, scoring low on the dismissing adolescent scale, reporting a low number of individuals that loved the respondent, and reporting a low number of times the respondent was in love were all related to scoring higher on the secure scale (see Table 19).

Table 19

Standardized Regression Coefficients (Betas) for Predictors of Adult Secure Attachment Scale Scores (Using the PBI)

Predictor Variables	Females (n = 127)	Males (n = 111)
Step 1		
caring mother	.01	.08
overprotective mother	.15	.25*
Step 2		
caring father	.08	-.09
overprotective father	.00	-.24
Step 3		
dismissing adolescent	-.02	-.24*
fearful adolescent	-.06	.02
preoccupied adolescent	.09	.10
secure adolescent	.07	.18
Step 4		
emotional distress	.03	-.12
times your heart broken	-.17	-.13
longest adol relationship	-.05	-.02
times you were loved	-.04	-.23*
number of relationships	.20	.36****
number of hearts you broke	.12	.13
times you were in love	-.04	-.28***

Note. Reported betas are from the final regression model.
*$p \leq .05$. ***$p < .005$. ****$p < .001$.

Summary of Results From Second Regression Analysis

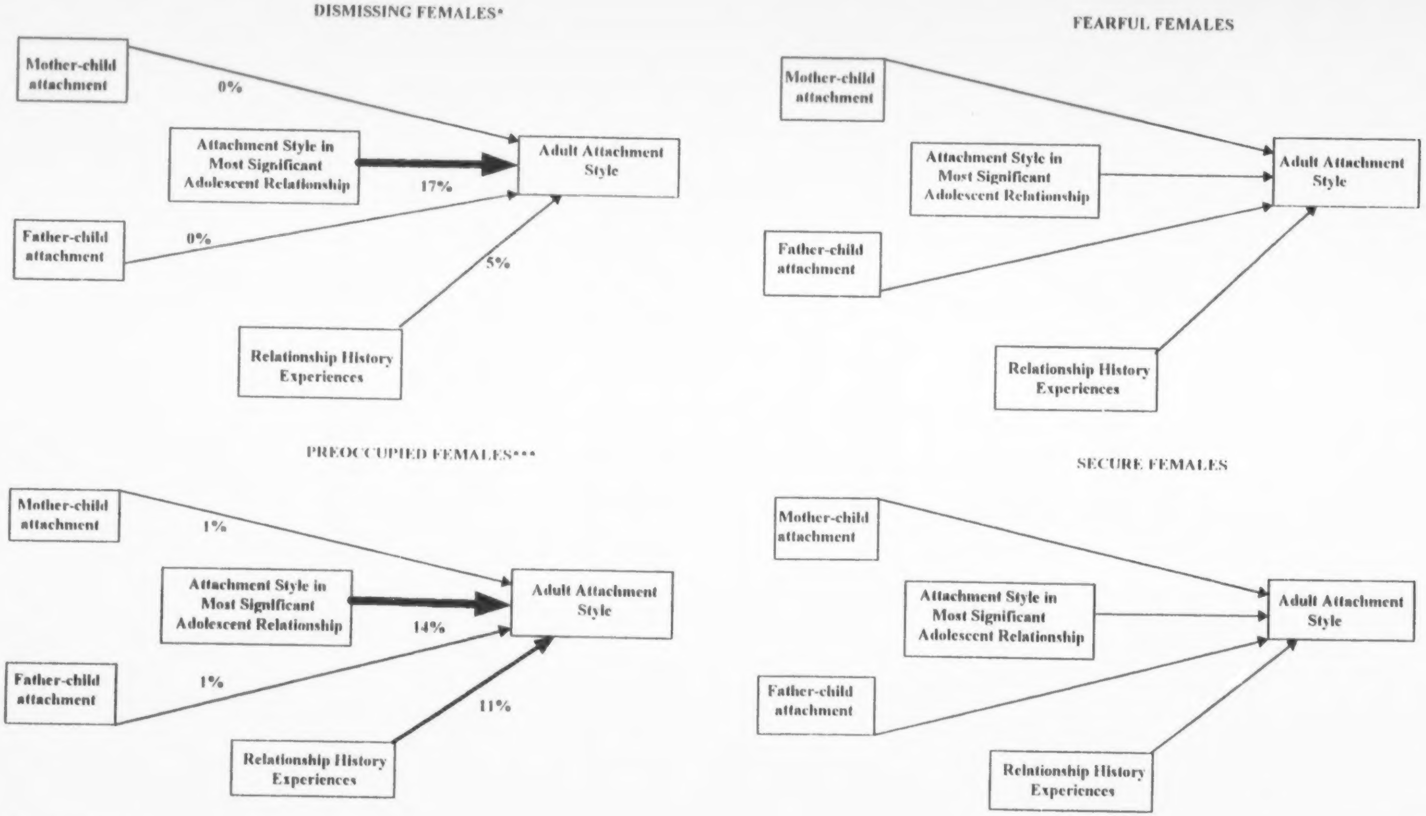
This set of regression analyses tested the hypotheses that parent-child attachment would predict current attachment styles (main hypothesis), that opposite-sex parents would have more of an impact on the individuals' current scale score than same-sex parents (sub hypothesis), and that adolescent attachment styles in the most significant adolescent romantic relationship and various relationship history variables would predict current attachment. An additional hypothesis stated that adolescent attachment would account for more prediction of adult attachment than parent-child attachment. Males' scores were reliably predicted on all four scales, while females' scores were reliably predicted on the preoccupied and dismissing scales.

Overall, contributions to current attachment scale scores from mother attachment scale scores and father attachment scale scores were small. However, some support for the main and sub hypothesis relating to parent-child attachment was found. For males, the opposite-sex parent (mothers) accounted for more variance in scores than the same-sex parent for the dismissing and preoccupied styles. On the other hand, for males' scores on the fearful style, the same-sex parent (fathers) accounted for more variance than opposite-sex parent, a finding which was different from the first set of regression analyses. However, for females, the influence of both parents was negligible for all attachment styles.

Support was found for the hypotheses that adolescent attachment and past romantic relationship experiences would predict current attachment scores. Furthermore, in all significant regression equations, adolescent attachment accounted for more variance than parent-child attachment. Thus support was found for the hypothesis that adolescent attachment would account for more variance than parent-child attachment. For both females and males, adolescent attachment scale scores accounted for more variance than relationship history variables for adult dismissing and preoccupied scale scores, whereas relationship history accounted for more variance than adolescent attachment scale scores for current secure and fearful scores. Figure 6 contains models (for each attachment style) of the relationships found for females and males, respectively. For significant findings, the percentage of variance each block accounted for is entered in the model. For non-significant findings, no percentage is entered in the model.

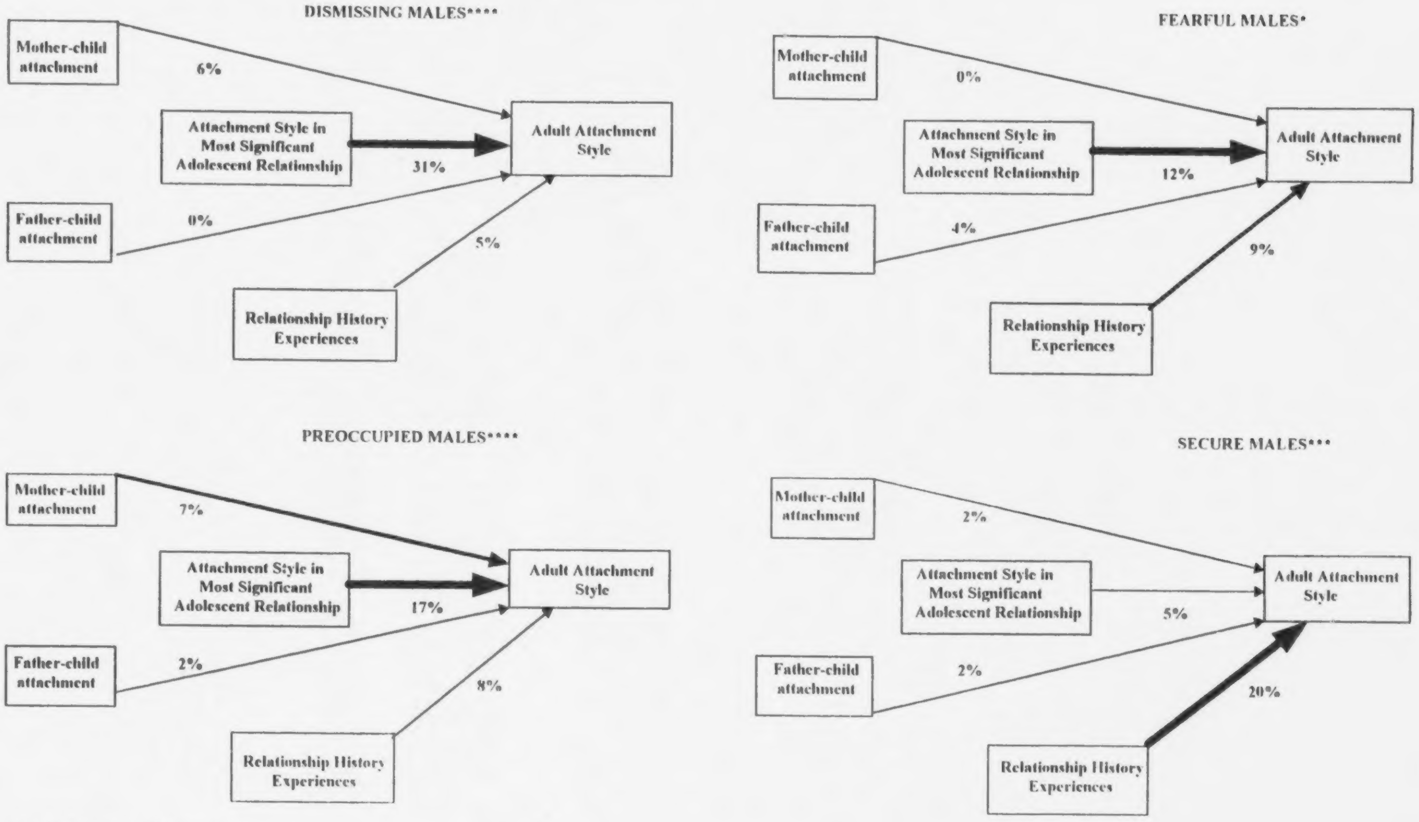
Figure 6: Predicting Adult Attachment Scale Scores (Using the PBI)

a) Predicting Females' Current Attachment Scale Scores From Parent-Child Attachment, Adolescent Attachment, and Relationship History Experiences (Using the PBI)


DISMISSING FEMALES*
Mother-child attachment
0%
Attachment Style in Most Significant Adolescent Relationship
17%
Adult Attachment Style
Father-child attachment
0%
5%
Relationship History Experiences
FEARFUL FEMALES
Mother-child attachment
Attachment Style in Most Significant Adolescent Relationship
Adult Attachment Style
Father-child attachment
Relationship History Experiences
PREOCCUPIED FEMALES***
Mother-child attachment
1%
Attachment Style in Most Significant Adolescent Relationship
14%
Adult Attachment Style
Father-child attachment
1%
11%
Relationship History Experiences
SECURE FEMALES
Mother-child attachment
Attachment Style in Most Significant Adolescent Relationship
Adult Attachment Style
Father-child attachment
Relationship History Experiences

*p<.05 ***p<.005

b) Predicting Males' Current Attachment Scale Scores From Parent-Child Attachment, Adolescent Attachment, and Relationship History Experiences (Using the PBI)


DISMISSING MALES****
Mother-child attachment
6%
Attachment Style in Most Significant Adolescent Relationship
31%
Adult Attachment Style
Father-child attachment
0%
5%
Relationship History Experiences
FEARFUL MALES*
Mother-child attachment
0%
Attachment Style in Most Significant Adolescent Relationship
12%
Adult Attachment Style
Father-child attachment
4%
9%
Relationship History Experiences
PREOCCUPIED MALES****
Mother-child attachment
7%
Attachment Style in Most Significant Adolescent Relationship
17%
Adult Attachment Style
Father-child attachment
2%
8%
Relationship History Experiences
SECURE MALES***
Mother-child attachment
2%
Attachment Style in Most Significant Adolescent Relationship
5%
Adult Attachment Style
Father-child attachment
2%
20%
Relationship History Experiences

*$p<.05$ ***$p<.005$ ****$p<.001$